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ABSTRACT

This document from the Training Teacher Trainers (TTT) project, which sought to improve the quality of the educational system through training personnel and developing programs, is divided into five major sections. Section one--The Director's Report--presents a detailed description of the total project, its major structures, processes, and accomplishments. Section two--the Evaluator's Report--offers the findings of an independent evaluator who made periodic visitations and who, as a participant-observer, presents a historical/clinical assessment of the project. Section three--the Discipline's Report--describes the experiences, reactions, and conclusions of the several members of the English Department, the only liberal arts department that made a significant commitment to the project. Section four is composed of a set of case reports of the six training programs conducted by the TTT project. Section five is composed of a set of case reports of the 10 field sites involved in the TTT project. A series of Technical Appendixes include data on faculty, participants, a project bibliography, and reports from several of the satellite projects. (Author/JA)

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AN EDUCATIONAL AD-HOCRACY

* * * * *

A SERIES OF FINAL REPORTS
OF THE
UNIVERSITY OF PITTSBURGH
TRAINING TEACHER TRAINERS (TTT) PROJECT

* * * * *

"A Setting which takes Time from components
and takes Place in all components."

* * * * *

JUNE, 1974

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
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The nature of an "ad-hocracy" is such that many are responsible for the successes of the venture. Such was clearly the case with the TTT project. The participation, involvement or contributions of many too numerous to enumerate appear in the following pages and are greatfully acknowledged. However, several deserve special mention.

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The administrators of the ten local educational agencies who were interested enough in the role of the school in training educational personnel to experiment with TTT.

Much of the creativity and potency of the TTT design was the result of the imaginative efforts of the project's first director, Dr. John A. Guthrie.

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Finally, a word of acknowledgement to the TTT participants--doctoral fellows, MAT's, PY's, and PPY's--who intrusted their professional training to this venture. We wish them well in their individual futures in the educational enterprise.

Charles P. Ruch
University of Pittsburgh
June, 1974

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ABOUT THIS REPORT

> *We are, in fact, witnessing the arrival of a new organizational system that will increasingly challenge, and ultimately supplant bureaucracy. This is the new organization of the future. I call it "Ad-hocracy".*
>
> *Alvin Toffler*

This report seeks to describe and explicate many of the aspects of a complex educational personnel development enterprise--the University of Pittsburgh TTT Project. This project, supported, in part, by funds from the Office of Education, spanned the four year period 1969-1973. It involved sixty-seven University of Pittsburgh faculty from two Schools--the College of Arts and Sciences and the School of Education. It provided full year, full time training for one-hundred three (103) doctoral Fellows and one-hundred twenty-eight (128) MAT's, one-hundred twenty-three (123) professional year (Seniors) and twenty-nine (29) career ladder pre-professional students in alternative training programs. Ten local educational agencies cooperated with the project involving sixty-five (65) professional staff and forty-seven (47) community members. Seventy-four (74) teachers received in-service training and credit through the project. Consortium arrangements or projects in six cities served as points of departure for the dissemination of project strategies and placement for project fellows.

TTT was a national program that sought to improve the quality of the educational system through training personnel and developing programs. The following clearly highlights the overall goals for the national TTT program:

> The primary purpose of the Trainers of Teacher Trainers Program (TTT) is to increase the effectiveness of the Nation's elementary and secondary schools by changing the systems of training educational personnel, with a direct focus upon programs for teacher trainers and trainers of teacher trainers. The transformation is not intended to be limited to teacher training programs as they have existed traditionally, housed in departments of education and schools; it is a transformation which brings into direct communication all persons who influence teacher training: Liberal arts professors, professors of education, school administrators, teachers, concerned members of the community, and prospective teachers. The TTT Program aims at prompting a concern for the education of teachers among every sector of the Nation which is affected by them, and at changing the role that each sector plays in the teacher training process.
>
> The TTT aims where all sectors of education and others--colleges of arts and sciences, teacher education programs, the schools, and the community--will work in parity towards the same objective: producing knowledgeable teachers, firmly grounded in their subjects with an up-to-date perspective on the nature of the students they will teach and the structure of the communities they will serve. In these settings, new patterns of teacher training will be worked out in exchanges among individuals from the different sectors. Other institutions and communities may then adopt or modify these patterns, using the experience gained within the TTT to design programs that are appropriate to their own problems in their own settings.
>
> Thus, the program is directed at broadening the perspective and improving the effectiveness of teacher trainers (who may be college teachers, cooperating teachers, or school principals); and trainers of teacher trainers (who may be graduate professors in the arts and sciences, professors of education, superintendents of schools or in a variety of other formal positions). Individuals in all of these roles are to be drawn together with in-service and pre-service teachers and with community members to work out imaginative, effective, and socially relevant programs of teacher education. (from a draft of a United States Office of Education working paper on the criteria for TTT, 1971-72)

Two major, and often competing, strategies characterized TTT nationally. One became known as the "multiplier effect"--the notion that by changing the "gate keepers" of educational training; the graduate faculties, who train teacher trainers, who, in turn train the teachers, changes in schools would follow. The other, "parity", was the notion of shared influence, responsibility and authority for training teachers among the disciplines, educationists, schools and the communities would improve teacher training and teaching. The former might be considered an elitist strategy; the latter a democratizing strategy. In either case, the mixing of the two into the same program provided an energy and tension not found previously in such educational personnel development endeavers. This energy and tension was felt in every aspect of the program including the Pittsburgh project reported herein.

* * * * *

This document is written with several purposes in mind, and it is addressed to several specific audiences. First, it is a final report to the primary funding agent, the Office of Education. As such, it seeks to report on the activities of a specific project addressed to specific educational personnel development needs.

Second, as a report to the sponsoring agency, the University of Pittsburgh and cooperating local educational agencies, this document seeks to articulate and explicate the involvements and accomplishments of those who engaged in, and supported, its activities.

Third, as a primary dissemination piece, the report is addressed to the larger educational community. In this context, it seeks to present in sufficient detail the many structures, processes, and issues in the training of educational personnel resulting from this complex venture.

To accomplish these goals, this report is divided into five major sections. Section One--The Director's Report--presents a detailed description of the total project, its major structures, processes and accomplishments

Section Two--The Evaluator's Report--presents the findings of an independent evaluator who made periodic visitations and, as a participant-observer, presents a historical/clinical assessment of the project.

Section Three--The Discipline's Report--presents the experiences, reactions and conclusions of the several members of the English Department, the only liberal arts department that made a significant committment to the project.

Section Four is composed of a set of case reports of the six training programs conducted by the TTT project.

Section Five is composed of a set of case reports of the ten field sites involved in the TTT project.

A series of Technical Appendixes include detailed data on faculty, participants, a project bibliography and reports from several of the Satellite projects.

While the five sections and appendixes are written to stand as separate documents, the totality of the project can best be communicated as the reader synthesizes for himself the various perspectives presented.

As Agee noted in another context

> *..This is a book only be necessity. More seriously, it is an effort in human actuality, in which the reader is no less centrally involved than the authors and those of whom they tell. Those who wish actively to participate in the subject, in whatever degree of understanding, friendship, or hostility, are invited to address the authors in care of the publishers. In material that is used, privately or publicly, names will be withheld on request.*
>
> *James Agee*

* * * * *

The TTT project, not unlike other similar ventures, developed a language of its own. While every attempt has been made to limit the level of "jargon" from the following pages, several terms--unique to the project--are so central to accurate reporting that their elimination was unthinkable. Thus, to acquaint the reader with certain of the project rhetoric, the following glossary is presented.

Project Glossary

The following explanations are presented to clarify the meaning of terms used in the project and in this report and are not intended to be technical, dictionary type definitions.

Ad-hocracy--	a kind of temporary, fluid, ad hoc, organizational structure (after Toffler, FUTURE SHOCK, 1970)
Cluster--	a regional grouping of TTT projects to support staff and program development activities. There were six Clusters, each with one project in the group as Cluster Center. Clusters provided workshops, meetings, exchanges, etc. Pittsburgh project served as the Cluster Center for the Great Lakes Cluster.

Program Coordinator--	a faculty member responsible for the co-ordination of all activities of a specific program.
PY or Professional Year Student--	undergraduate (usually senior) year long training program for prospective teachers involving course work and field-based, clinical experiences.
PPY or Pre-Professional Year Student--	a multi-year training program for para-professionals pursuing an undergraduate degree in education in combination with work in a field site.
Satellite or Consortium Project--	one of six cities from which Pitt TTT recruited fellows from and placed externs in. They became the focal point around which "spin-off" or planned dissemination of TTT processes might begin. Recruitment involved teams from teacher training institutions and local schools, with institutional interest in reforming teacher training processes.
Site or Field Site--	co-operating local educational agency involved with the TTT project.
Site Coordinator--	a faculty member responsible for co-ordination of all TTT project activities in a given site.
Site Committee--	a committee related to a specific site responsible for TTT activities in that site. Usual membership included representatives from the University, local education agency, citizens, and students.
"T"--	a generic term for any entry level educational personnel, eg., teacher, counselor, etc., or someone in training for such a position.
"TT"--	a generic term for any educational personnel with pre-service, in-service

	or supervisory responsibilities for a "T", eg., critic or master teacher, principal, Liberal Arts or Education faculty, etc., or someone in training for such a position.
"TTT"--	a generic term for any educational personnel with pre-service, in-service or supervisory responsibilities for "TT"s, eg., graduate faculty in Liberal Arts or Education, supervisory personnel with district-wide responsibilities etc., or someone in training for such a position.
TT Fellow--	full time, M.Ed. level student, in a program for staff and program development (only 1969-1970).
TTT Fellow--	full time doctoral student with the TTT project pursuing an Inter-departmental, Inter-disciplinary Program in Teacher Education. Selection included equivalent of approximately sixty (60) graduate credits, appropriate experiences and nomination by a co-operating site or consortium city.
TTT Intern--	second or third year TTT student spending 50% or more time in a project field site.
TTT Extern--	second and third year TTT student spending 50% or more time in a consortium city project.

SECTION ONE

THE DIRECTOR'S REPORT

Charles P. Ruch

Co-Director--1969-1971
Director--1971-1973

THE DIRECTOR'S REPORT

This Section seeks to acquaint the reader with a description of the several dimensions of the complex educational personnel development project known as Pitt TTT. It is an attempt to describe and explicate the project's many structures and dynamics from design to outcomes. For each of these, issues raised through project personnel or activities are reported. Several conclusions and recommendations comprise the last few pages of this Section.

> *The task is huge: it is not possible to reform the education of teachers without reforming higher education as a whole.*
>
> *Charles E. Silberman*

Need and Strategy

Prior to the existance of the national TTT program, the major degree producing universities across the country had not addressed their programs to the issue of training. Little specific effort had been expended on either the preparation of doctoral or post-doctoral persons who would be or who are functioning as Trainers of Teachers (preparing bachelor and masters degree teachers) or as Trainers of Teacher Trainers (preparing doctoral degree trainers of teachers). The usual doctoral level person was trained primarily as a reseacher, a scholar, or practitioner of his particular discipline or field of study. These scholars, researchers or practitioners received little preparation for what frequently became a significant and major part of their post-doctoral role--teaching and the preparation of teachers and teacher trainers. This lack of focus and effort in the universities was evident, not only in the *training of graduate personnel*, but in their *development of graduate programs*. The national TTT program (and as a constituent part, the University of Pittsburgh TTT Project) was addressed to these dual educational development needs.

Fragmented Components and Levels

The training of educational personnel (undergraduate and graduate) and the development of such programs was then, and is still in most cases, characterized by fragmented and isolated components and levels.

Persons from the disciplines, schools of education, local schools, communities, and the students themselves, are implicitly or explicitly involved in the training process. Too often their contributions are fragmented and disjointed; their interactions rarely deal with issues related to training. Similarly, as institutions, Colleges of Arts and Sciences, Schools of Education, local educational agencies, and the community, all have their own emphasis, preoccupations, and values; their own time and space. While all play a role in training, training is not the primary process of any one component.

Fragmentation and isolation also characterize the relationships between the vertical levels of the educational personnel development enterprise. Undergraduate students rarely had contact with graduate students, master's level with doctoral students, beginning doctoral students with doctoral interns or externs. Opportunities for multi-level teaming were virtually non-existant. Arrangements for experienced master's level teachers to work with MAT teachers, doctoral students to teach or supervise undergraduates, while themselves being supervised by the faculty are too often absent. These educational levels, like the components, are charaterized by their own structures and schemes which tend to perpetuate isolation and fragmentation. Courses, grades and credits, degrees, rank and position all support this bifurcated environmental condition.

The Strategy: Place or Process?

Early in the stages of TTT it became obvious that the training of teacher trainers took place in programs and departments designed essentially for other purposes, usually the preparation of researchers, scholars or practitioners. Few, if any, doctoral programs addressed themselves centrally to the recruitment, training and placement of teacher trainers or trainers of teacher trainers. In fact, the competencies produced by most doctoral programs in the area of training were implicit, were often poorly defined, and less well developed. The disciplines, the educationists, the schools, and the communities all had placed training and the development of training programs (undergraduate and/or graduate) well below the top of their list of priorities. Inevitably then, staff, budget, and sanction went first in other directions.

With this realization--that for the forseeable future the disciplines, schools, and communities, and too often even schools of education probably intended to continue to function primarily around goals and priorities other than those emanating from training--it appeared that none of these sectors of society which should be critically involved in the training of teacher trainers would soon become a compatible home for the development of such programs such as TTT. Upon analysis, none of the four institutional components, the disciplines, schools of education, the schools or the community, appeared to be fertile ground for the programmatic support for the development of a TTT project. Consequently, in an attempt to involve all components and to seek a vital place for training, an alternative program model was sought.

A program model that was sought was one which (a) would avoid the institutionalization of TTT within any one component (disciplines, schools, communities, or school of education), and (b) would bring all components into immediate contact with teaching realities. Gradually, TTT created an educational "ad-hocracy" which provided a loosely bound structure to serve as a temporary and fluid system. It developed a process through which all participants (faculty and student) could move from their primary identification into a situation where, together, they might become commonly identified with the development of training programs and the cooperative training of teacher trainers and teachers. It was hoped that from this experience they might return to their primary identification with new skills, insights, and relationships necessary to deal with training from a different perspective.

At a conceptual level, the development and operation of such alternative program model draws heavily on the notion of integration as its underlying strategy. Several characteristics and dimensions of this concept can be identified.

Integration implies a process. This strategy has both dynamic and synergetic properties. With a tempo unique to each setting, an integrated format is not accomplished by a single act or event at a given point in time. However, single acts or events are critical to the process.

The process is one of constant evolution. The place is never the same. Present conditions are the result of the incorporation of past experiences with new energies and opportunities.

Flexibility characterized interactions between and among the constituent parts.

Finally, integration paradoxically implies the sharing of many common objectives with the rest of the system, as well as the development of divergent interests and concerns from the rest of the system. While many of the objectives, values and interests from the larger system will be manifest in the individuals involved in such a setting, their interactions and activites will develop new and different perspectives and agenda. Consequently, processes and products resulting from such a program may be different from those of the systems from which it draws its resources.

Such an alternative model or setting need never become a place in the geographic or institutional sense. Rather, as a process, it identifies the beliefs and values, the responsibility and power, invested in groups of individuals through their identification and association. Together they are able to shape, expand, and inform whatever place they might be functioning within. Such a setting, should remain physically an "ad-hocracy"; essentially in process. Its success might best be measured by its ability to elicit energy from all components involved in the training of educational personnel and support processes and activities that permeate, are beneficial to, and are adopted by each component. In short, it should be a setting which takes *time from* all components and takes *place in* all components.

Project Goals

Specifically, TTT at the University of Pittsburgh sought to develop an alternative program model or setting where individuals and resources from the five components (disciplines, schools of education, schools, communities, and students) might be integrated through the training of educational personnel at four levels (pre-professional and senior-year undergraduates, experiences and in-experienced masters level teachers, doctoral, and advanced doctoral level interns/externs). *The development of a doctoral or post-doctoral program to prepare persons with basic and primary competency as trainers with supporting competencies as researchers, scholars or practitioners of their art or discipline was the focal point of the project*. In addition, it sought to identify, involve, and hopefully, increase the effectiveness of persons who were prepared primarily as researchers, scholars, or practitioners of their art or discipline but who spent a significant per cent of their time teaching in programs preparing prospective teachers and teacher trainers. Finally, it sought to identify and involve persons who were not then involved in the training process, but who should be involved. Categorically these persons were often found among students about to become teachers and in the community served by the schools. Frequently, however, personnel from all five components felt little or no stake in the training process.

Project Rationale

The rationale for the University of Pittsburgh TTT Project was simple and straightforward. Administratively, the task was one to establish, with the support of the United States Office of Education, conditions free from usual rituals and restraints and resources with commitment and potential to develop within those conditions improved processes for training teachers and the trainers of teachers. The essence and outcomes of the project were focused on the development and implementation of processes vital to personnel development and program development. Once operating, administrative and institutional processes became secondary and supportive. The task was essentially dependent on personal and professional processes.

In more specific terms, the University of Pittsburgh TTT project attempted to remove restraints and structures that had been found to predetermine or hinder process development (eg., grades, courses, credits, fragmented time schedules, short term involvements, specific predetermined goals and outcomes, large classes, requirements not related to teaching and teacher training, etc.).

Thus freed from usual restraints on process development, the conditions of the project possess the necessary dimensions and were open enough to allow for both process extension (over time and place) and intensity (within time and place). Essentially these conditions consist of time parameters such as:

full time,
full year,
continuous sequencing, and
block-time scheduling,

and space parameters that provide open space designated for TTT

on campus,
in schools, and
in communities.

Resources deemed necessary for involvement in all major processes related to teacher training were brought together under the above conditions. They consisted of components of the Liberal Arts, Education, schools, communities, and teacher trainees.

The critical point for bringing all of these resources together and around which all of these resources function were various cadres of students grouped into programs according to the level of training in education; doctoral interns or externs, doctoral fellows, MAT interns, seniors in their professional year, and pre-professionals engaged in preparation for careers in education at the pre-bachelors level.

Thus, the TTT strategy involved the bringing together, and hopefully integrating for some length of time, the five components and the four levels of training under the particular open and negotiable conditions of the project. It provided all involved, especially the

Teacher Trainers (doctoral fellows) and the Trainers of Teacher Trainers (faculties, staff, and committees), with the challenge of facing, at an operational level during the year, a full gamut of problems and opportunities in the training of teachers and in the development of improved programs of teacher education.

> *. . . that the before-the-beginning period contains organizational dynamics which tend to work against rather than for the new settings in the sense that its heritage is marked by conflict, real or potential. If this seems obvious to the reader, as it should, let him ponder the point which we shall be discussing later, that those who are given responsibility for the new setting almost always proceed either as if the reverse were true or as if their heritage were truly virginal.*
>
> *Seymour B. Sarason*

Development

A capsule description of the four years of the University of Pittsburgh TTT project from the chronological and developmental perspective is presented here. Many of the strategies, structures and processes alluded to in this part are discussed in greater detail elsewhere in this report. This overview attempts to highlight both the heritage from which the TTT project grew its roots and the key events and decisions that marked its life span. The development of the Pittsburgh TTT project is one of the discovery of the potency of the concepts inherent in the national program, as well as, the fortunes of the politics of federal funding.

Before TTT

The TTT program at the University of Pittsburgh grew out of a rich heritage of innovative, experimental programs for the training of educational personnel. Many of the key personnel to become involved in the TTT project had worked together on a variety of federally funded and/or locally supported educational personnel development projects. These antecedent activities included a three year NDEA Institute in Guidance and Counseling (1965-1968) directed by Dr. John Guthrie, the first director of the TTT project. During these three years, a team of personnel were recruited and experienced working together cooperatively. A new, potent model for training educational counselors was developed and piloted. This training design, which had as its core personal and professional development, produced a new kind of counselor, one who was able to work effectively with individual students, with groups of students and professionals, and with the system as a client. One of the outcomes of the NDEA experiences was the discovery that training highly competent, change-oriented personnel was not enough. Follow-up experiences in workshops soon found that many of these single "change agents" were soon "corrupted" by a system or became disillusioned, and, in effect, were neutralized in their change efforts. It was observed that when two or more of these kinds of counselors could be placed in the same district, support systems could be developed both within the system and from neighboring systems including the University. Changes in the conduct and design of the guidance and counseling program were more likely to be accomplished under these conditions.

At the close of the NDEA Institute program, the University of

Pittsburgh in conjunction with three other NDEA Institutes held a major meeting in Phoenix, Arizona to disseminate the major findings of Institute type training programs to a wider audience than counselor educators. The key dimensions of this kind of training included: (a) the person as a learner, (b) the use of groups, (c) the use of supervision, (d) the role of the disciplines, and (e) the structure of the training design itself. This meeting, IMPACT, provided a natural movement from the training of counselors into the training of other educational personnel.

During 1967-1969, many of the same faculty conducted an Experienced Teacher Fellowship program, a two year program designed to recruit, train and return to three specific agencies in Allegheny County, multi-disciplinary teams of educational personnel. Three particular agencies were involved in the Experienced Teacher Fellowship program; the Pittsburgh Public Schools (inner city), Allegheny County Institutionalized Childrens Program (delinquent/dependent youth), and Churchill School District (a suburban school district). The Experienced Teacher Fellowship program provided the core staff with experiences in field-based training, targeted to meet the specific needs of different kinds of educational programs, and the training of multi-disciplinary teams including administrators and subject matter teachers, instructional and subject matter supervisors, as well as, counseling and reading support personnel. The Experienced Teacher Fellowship program permitted the core faculty from the Department of Counselor Education to begin to work with other personnel from the

School of Education and the University at large. This program continued the development of the training model and expanded input into the training from a variety of sources. Finally, the Experienced Teacher Fellowship program provided the experience with several aspects of teaming, including the recruitment of teams from an agency or institution with specific plans to return to that agency after training to begin to develop new kinds of educational programs. This strategy solved placement problems at the time of admission.

During the same general time period, two other Departments were equally involved in training activities. At the University of Pittsburgh, the Department of Elementary Education under the leadership of Dr. Horton Southworth, was involved with the Elementary Teacher Training Models, an Office of Education sponsored program. At neighboring Carnegie-Mellon University, the History Department had developed a Social Studies/History Curriculum Center under the leadership of Dr. Ted Fenton. These three educational personnel development activities provided the backdrop against which TTT emerged.

Year One -- Discovery

The first year of the TTT project at Pitt was really a year of discovery of what TTT was all about, what its potency and possibilities were for people and institutions, and, the identification of viable strategies and structures. The project itself was an umbrella for three separate, but inter-related, educational personnel development projects. The first of these was, in fact, the second year of the Experienced Teacher Fellowship program discussed above. The second was an Experienced Teacher Fellowship program funded at Carnegie-Mellon University for the training of a number of Master teachers and teacher trainers. The Carnegie-Mellon program emerged out of several years experience with Experienced Teacher Fellowship programs and a Carnegie Foundation funded Center for History and Social Studies curriculum. The third project was a staff and program development project at the University of Pittsburgh designed to train teacher trainers in the processes of staff development and program development. Several structural dimensions characterized this merger of the three separate programs, no one of which orginally designed as a TTT program, but collectively encompassed many of the TTT elements.

First, Pitt and Carnegie-Mellon agreed to recruit *teams of students from six target cities*. These teams would include students from at least one teacher training institution in that city and one major urban school system. Some of the students attended Carnegie-Mellon where the emphasis was on curriculum development and its related aspects. The balance attended the University of Pittsburgh where the emphasis was on staff and program development.

Second, the program provided for an *overlap day* where the Pitt fellows spent half a day at Carnegie-Mellon and the Carnegie-Mellon fellows spent half a day at Pitt. The program at Pitt was interdepartmental with the departments of Elementary Education, Secondary Education, Counselor Education, and Reading and Language Arts.

Third, it was envisioned that fellows from both projects would spend common time in common field sites. No formal agreements were made with field sites or undergraduate teacher training programs. Consequently field work was more of an in-service nature with existing districts, mostly in elementary sites. Involvement in undergraduate or graduate teacher preparation depended on the existing teacher training programs at Pitt. Site committees for each site were introduced and the notion of a core faculty for the training program, especially for the twenty-five Master's, was initiated. The strategy called for returning these teams to their cities for the second year to begin to work with the sponsoring teacher training programs in an attempt to break the linear, fragmented training model so characteristic of teacher training. The recruitment followed the multi-city strategy; recruiting twenty-five students at the Master's level, five doctoral students and one post-doctoral fellow.

During Year One, the Leadership Training Institute site visit was made to both the Pitt and the Carnegie-Mellon projects. The site visits (12/3-5/69) began to raise a variety of issues that were already clearly in the minds of those involved in the conduct of the project. These included: (a) TTT as a doctoral level program, (b) practicum for trainees necessitated access to a model teacher training program, (c) Discipline, field and community inputs were critical, and (d) the Carnegie-Mellon-Pitt arrangement was not working.

Planning workshops for Year Two were conducted with teams both from Pitt and Carnegie-Mellon, each team by city, as well as, with the various components. On the basis of the experience of many involved in Year One, several significant changes were made for the following year.

Year Two -- Pilot

A variety of changes characterized the second year of the project and by the close of Year Two the project had piloted a model TTT training sequence. The first basic change that was made was in the recruitment of fellows. Year Two saw twenty-five doctoral level (actual or potential) TTT's recruited and start their training with the Pitt project. The second, saw the involvement of the Department of English at the University of Pittsburgh and the breaking of ties with the Carnegie-Mellon Experienced Teacher Fellowship project. Third, it saw the development of an alternative undergraduate and Master's level programs for the training of English teachers, both as a demonstration for the faculty and the doctoral students as to alternative ways of training teachers and as practical experiences for TTT fellows and faculty. Fourth, the project switched emphasis from Elementary to Secondary Education. This decision was predicated on a number of factors including (a) the fact that the Elementary faculty were already involved in the Office of Education models project, (b) the schools were anxious to develop secondary programs, and, (c) the interest of the Discipline faculty in becoming involved in the preparation of educational personnel.

It was eminently clear during Year One that trainers can not be adequately trained without they themselves being directly involved in training activities themselves. The absence of clearly defined training programs that could be used as a practica experience for teacher trainers in TTT precipitated the development of the alternative professional year and Master of Arts in Teaching in English program for English teachers. This then necessitated the restructuring of the relationship between the project and the cooperating field sites. Formal contractual arrangements were made between the field site and the project to provide for the instruction of certain classrooms and to staff each of these classrooms with teams of MAT's, PY's, doctoral fellows and faculty from both the disciplines and the School of Education. The formalization of field sites involving site committees and site co-ordinators started Year Two.

Year Two proved to be a pilot year for the identification of the horizontal and the vertical dimensions that became characteristic of the Pittsburgh TTT project. In addition, the project became involved in sharing its experiences and learnings from the experiences in other TTT projects across the country through the vehicle of Clustering. Many of those involved in the project participated in the number of Cluster sponsored meetings, including those on Schools, the Liberal Arts, the Community, and Teacher Training.

Year Three -- Implementation

Year Three was clearly the height of the TTT project. It represents the total operationalization of the TTT model both as it operated at Pittsburgh and as it extended into the variety of satellite and consortia arrangements.

A variety of structural changes were made for this major year of operation. The recruitment strategy of recruiting by teams from cities or agencies continued for the third year. It became evident that the recruitment of doctoral students and the development of the doctoral fellow role in the MAT/PY programs necessitated some lead time for doctoral students at Pitt. Consequently, a summer session was arranged for the new doctoral students whereby they would have six weeks at Pitt to begin to develop basic training competencies, to begin to understand the kinds of program and training opportunities at Pitt, and to return back to their cities during the month of August to clarify additional roles and responsibilities.

The doctoral fellows returned in September when the project expanded to conduct four MAT and PY programs; one in English, social studies, mathematics and science. During Year Three a site visit for program approval for the four initial preparation programs (MAT and PY programs) was conducted by the Pennsylvania Department of Education. This then assurred graduates of the alternative undergraduate preparation and Master's programs of state certification and allowed for the identification and sanctioning of these dimensions of the TTT program.

Internships for second year TTT fellows were established in the cooperating field sites and externships were negotiated and operationalized with the cooperating consortium in project cities, so that the return back to the field sites permitted the continuation and dissemination of TTT and TTT-like activities into the cities and sites from which the students were recruited.

Year Four -- Dissemination

During Year Three, it became evident that the fourth year would be the final year for the TTT program nationally,and TTT locally. Activities started well during the third year provided for the gradual and specific phasing out of the TTT project as a project entity. Many of the activities operating during Year Four represented attempts to institutionalize those parts of the TTT project that were useful. In addition, Year Four activities began to expand into in-service activities or to incorporate back into the regular training programs at the University of Pittsburgh training notions that had been operationalized by TTT for pre-service teacher preparation which were of value and learned during the TTT experience. New doctoral fellows, locally supported rather than federally supported, started their training under a now approved and operating Inter-department, Inter-disciplinary Program (IIP) in teacher education. Additionally, MAT and PY programs were operated in the four subject areas. Several sites began to develop combination pre-service and in-service training which involved many of the TTT notions. Attention was focused on the internships and externships for the balance of the doctoral students while finishing out their degree program. The project as an entity terminated on June 30, 1973.

The outcomes of the project are still being assessed and many of the processes initiated are still in motion. These issues are discussed in the following materials.

As a Cluster Center, the Pittsburgh project participated in an extention activity,(1973-1974) PROJECT OPEN/TTT, a series of interrelated activities to extend the benefits of TTT nationally to a larger audience. Several of these activities are documented elsewhere in this report.

University of Pittsburgh TTT Project

Chronology of Major Events

Year I

September, 1969	-Year I project starts with 25 M.Ed. level TT's and 6 doctoral level (TTT's) in addition to 18 second year Experienced Teacher Fellows.
November 8-10, 1969	*-Appalachian Cluster Meeting - Pittsburgh, PA*
December 3-5, 1969	-L.T.I. Site Visit to Pittsburgh Project
May 20-22, 1970	- Bedford, Pennsylvania planning meeting (Representatives from sites, satellite projects and programs meet to plan for Year II)
	- Follow up Site Visit by L.T.I. team also attended Bedford Meeting
June 21-23, 1970	*-Southeastern & Appalachian Cluster conduct meetings on "Year of the Liberal Arts & TTT" - Miami, Florida*

Year II

September, 1970	-Year II project starts with 25 doctoral level TTT's--also parallel PY & MAT programs in English
September 9, 1970	-Opening Session
October 25-27,1970	*-Great Lakes Cluster Meeting, "The Schools & TTT"--Cleveland, Ohio*
December 6-8, 1970	*-Great Lakes Cluster Meeting, "The Liberal Arts & TTT"-- Syracuse, New York*
January 14-16, 1971	-Indian Lake Planning Meeting (Program & Site coordinators meet to plan for Year III)
March 6-10, 1971	*-Great Lakes Cluster conducts Action Lab, "Restructuring Teacher Education: A Revolutionary Model" at ASCD Meeting--St. Louis, Missouri*

May 1-3, 1971 -Project sponsors Multi-University Conference regarding involvement of Departments of English in Teacher Education

May 12-14, 1971 -Great Lakes Cluster sends teams to L.T.I. Meeting on "Cultural Pluralism & Teacher Education--Chicago,Illinoi

June 1-2,1971 -Ligonier, Pennsylvania Planning Meeting (Develop specific plans for Year III)

Year III

June 15, 1971 -Year III project starts for 18 doctoral fellows (TTT's)

September,1971 -MAT& PY programs in English, Social Studies, Math and Science start

September 30, 1971 -Opening Session

November 1-9, 1971 -Joint Pitt TTT/CMU-American Historical Association Meeting--Pittsburgh, Pennsylvania

January 31-
February 4, 1972 -Pennsylvania Department of Education Site Visit for program approval for all MAT & PY programs

February 21-25. 1972-Site Visit by ABT team as part of Impact Evaluation for BEPD/OE/HEW

June, 1972 -Planning Meetings (emphasis on dissemination and institutionalization)

June 30, 1972 -End of Cluster Activities

Year IV

September, 1972 -Year IV program starts with 4 doctoral fellows(locally supported) and MAT & PY programs

June 26-27,1973 -Champion, Pennsylvania meeting--PROJECT OPEN/TTT

June 30, 1973 -Project Terminates

> *On all the subjects the knowledge of which is important for the business of living, what life is, what human nature is, what the mind is, what the body is, the scholar knows more than other people. It shouldn't lie outside his sphere to gather up that knowledge and present to the rest of us his conceptions, his understanding, of these great realities. But that means he must contemplate his subject as a whole, not only research in his particular corner of it. Such contemplation is out of repute, no business for the honest scholar.*
>
> *Robert M. MacIver*

Four Components - Integrated Training

One of the key strategies of the TTT program was to bring together the four components (Education, Disciplines, Schools, and the Communities) long involved in teacher preparation in more meaningful and co-operative configurations. The Pitt project utilized this strategy throughout all training activities conducted. The primary vehicle for the actualization of such a strategy was the Program. Throughout the life of the project, this structural arrangement was employed as the primary unit of organization. In its most generic form, a program is a temporary social system designed to bring together learners and the resources necessary to facilitate their continued learning. More specifically, it was about twenty to thirty students, a faculty of five to eight, and resources on-campus, in field schools and agencies, and in the community. This team worked together for a specific time period (a year) to achieve some mutually desired goals (teacher training, etc.). The project organized all training around this programmatic structure. The numbers and kinds of programs conducted by the project are outlined in the following chart.

DEVELOPMENT OF PROGRAMS

	1969-70	1970-71	1971-72	1972-73
Doctoral (TTT)	X	X	X	X
Masters (TT)	X	---	---	---
MAT/PY (T)				
English	(CMU)	X	X	X
History/Social Studies	(CMU)	---	X	X
Math	---	---	X	X
Science	---	---	X	X
Arts / Humanities	(CMU)	---	---	---

****

Development of Programs

There was, by design, some overlap between participants in programs. The TTT fellows were organized into a program for their own training. As part of their training, they participated in all phases of the conduct of a PY/MAT program as a practicum experience. In a similar vein, faculty might be involved in more than one program. Consequently, vertical articulation across programs provided for multi-level involvement of all project participants.

The major characteristic of this strategy was that it provided a common place and focus around which representatives from the four components could come together to re-assess the issues and problems of teacher preparation and their own unique contributions. By having all the components working together around a common task, e.g., training twenty-five to thirty teachers for a year, many new strategies, skills and roles could be tried out. By having each program responsible for the actual instruction of a number of classes in field sites, a second reality was ever present around which the four components had to relate.

The management design for each program was a core faculty, a management team composed of representatives from the four components plus the TTT fellows and representatives from the students. The core faculty was given the total responsibility for designing and co-ordinating all the training activities for the thirty students in that program for the year. A program co-ordinator was responsible for the co-ordination of the program and the implementation of the core faculty's decisions. The programmatic structure for the project is diagrammatically represented in the following charts.

This organizational arrangement provides an unusual opportunity

TTT PROGRAMS

DOCTORAL

Externs

Interns

Fellows (20)

M.A.T.--P.Y.

English	Math	Science	Social Studies
5 Experienced	5 Experienced	5 Experienced	5 Experienced
5 Inexperienced	5 Inexperienced	5 Inexperienced	5 Inexperienced
20 P.Y.	20 P.Y.	20 P.Y.	20 P.Y.

PreProfessionals

10 Second Year

20 First Year

Arts & Science

New Careers

Secondary Education

School Districts

Community

PROGRAM STRUCTURE

COUNSELOR EDUCATION

DISCIPLINES, SECONDARY EDUCATION, SCHOOL DISTRICTS,

COMMUNITY, STUDENTS, READING & LANGUAGE ARTS

SUPPORTING FACULTY	ADMINISTRATION & FACULTY	SITE COMMITTEE	TEAMS, GROUPS

DOCTORAL FELLOWS

5 Experienced
M.A.T.--5 Inexperienced

P.Y.--15 to 25

Pre-Professionals--3 to 8

for the precipitation and creative resolution of the issues related to education and the training of educational personnel. Several of these are presented below in their generic form. Taken collectively they seek to ask what is a teacher and what should go into the preparation of a teacher? The appended case studies from the various programs offer data regarding attempted strategies and situations. Most importantly, however, was the fact that this organizational scheme necessitated the processing of all these issues each year for a new group of trainees. This provided the TTT fellow with actual experience in dealing with these issues as part of a doctoral degree in training, as well as, an opportunity for many faculty to deal with these issues in dialogue with representatives from the other components.

1. On-campus versus in the field. It is generally agreed that both university and field are necessarily "places" to train educational personnel. What is best presented where? How much time at each place? What functions should faculty and district personnel perform on each other's turf?

2. Common versus unique experiences. What should be required for all students in a program? What electives whould be offered, where, when, why?

3. Discipline base/ site specific. Each program worked with a number of different kinds of local educational agencies. Each agency possess special characteristics, needs and requires certain specific skills from its personnel. How much can or should a training program respond to such site specific needs? What changes are re-

quired on the part of the faculty, course content?

4. Supervision. What is it? By whom? How much? Where?

5. Multi-level students. The initial assumptions about experienced versus inexperienced MAT teachers; locally and nationally recruited PY's; undergraduate education or discipline majors were often not sustained over the year's experience. The categories of the students often did not match their performance requiring functional rather than categorical grouping.

6. Foundational input. In spite of previous work in the traditional Foundations of Education (Educational Psychology, Philosophy of Education, etc.) each program struggled with designing input to deal with a number of "issue specific" topics generic to all teaching. These included input on:

   a. human relations,communications, etc.,
   b. reading,
   c. intergroup process, and,
   d. special education children in the regular classroom mainstreaming; behavior modification.

7. The assessment of professional practice. Should you give grades? Pass/Fail? Recommendations? How do you assess competencies?

8. What is a competent teacher? Strong in subject matter, skilled in communication? Relationship with children, peers, etc.?

9. Component roles. What does each of the components have to offer to the process of training educational personnel? The roles, skills, and responsibilities of each component were negotiated periodically through the core faculty process. New roles and relationships;

alternative teaming and paired arrangements, as well as, new personnel in new situations were possible.

10. Student teacher as a professional. An explicit outcome of these activities was a redefinition of the structure, role and functions of "student teaching". The project sought to move away from the student teacher/critic teacher, one semester model to one where multi-level professional teams, including the student teacher, spent a full year in a classroom. These teams would be characterized by experienced teachers working with inexperienced ones with ample support and role modeling from district supervisory personnel and University faculty. Peer supervision, clinical supervision, team planning and conduct would involve the novice teacher as a full member of a professional team. The full year would provide a significant length of time for the development of a full range of instructional modes, student groupings and content emphases for the beginning teacher.

11. Combined pre- and in-service. Pre- and in-service were viewed as complementary processes; not separate, disjointed activities or events. The placement of a significant number of University resources in the same building or district was the first, necessary structural arrangement to bring pre- and in-service training activiites for educational personnel together. On-site or on-campus workshops, courses (some for credit), curriculum development, and new instructional arrangements are readily possible under these conditions. The core faculty was responsible for providing for both kinds of training experiences.

12. M.Ed. to a five year program. The heterogeneous nature of the teams (inexperienced PY's with experienced and inexperienced MAT's) provided ample experience to test the efficacy of the M.Ed. or MAT degree, as well as, providing structurally for "cross grade" groupings. The structure could easily provide the foundation for a five year program in teacher education--the PY year as a team member moving into a paid internship, the fifth year of the sequence.

> *Despite the apparent (and often real) sluggishness with which schools and colleges respond to new conditions, educational programs and institutions are constantly changing. Education takes the world as its subject; it is the process by which we learn of the past and the present in order to shape the future. At the same time, of course, education acts on the world of which it is a part; educational processes and programs are instruments for changing the world. Taken alone, either one of these missions--understanding the world and altering it--is difficult enough; together, they are enormously more difficult and sometimes even in conflict. In America, this dual mission is further complicated by the responsibility of educational institutions to teach an infinite variety of human beings, differing in interests, abilities, and experiences.*
>
> *Edward J. Mead, Jr.*

Multi-Sites -- Field-Based Training

A specific series of strategies were developed and utilized by the TTT project to bridge the horizontal gaps between three institutions involved in the preparation of educational personnel. Ways were sought to lesson the University--School District--Community barriers and to provide for freer access for personnel across these institutions. It was felt that a fully functioning educational personnel development program should draw upon the resources of both institutuions and their communities, as well as, take place in both settings.

Much of what TTT was all about centers on this notion of vertical articulation. Opportunities for unversity personnel to work in schools and the converse were deemed too limited. Similarly, teachers in training and potential teacher trainers should have more access across the school-university barriers and more space in each institution.

Consequently, TTT fellows were provided with experience in all three places; across institutions and into communities, learning how to function effectively in each setting.

The specific strategy the Pitt TTT project selected was one of the developments of a series of field sites. In the generic sense a field site is an educational agency and its community that is willing to provide access and resources for the training of educational personnel in addition to the delivery of its educational program. The operationalization of this strategy involved the following:

1. A variety of sites. All schools are not alike. Within the immediate region served by the project, there are urban, suburban, urban-rural, and rural schools both public and private. In addition, not all certified educational personnel work in schools, per se. They can be found in Youth Development Centers, Comprehensive Rehabilitation Centers and Alternative Schools, to name a few. Consequently the project sought to provide space in as many different kinds of sites as possible. The following charts illustrate this development of sites involved in the project.

2. Variety of spaces in sites. To provide both access for trainees and trainers involved in the project to the educational program and to confront project personnel with the realities of

teaching, the project developed space in field sites. A number of arrangements were utilized including: classrooms, teams, and departments. In each case the project contracted for a specific number of positions and then filled these positions with teams of MAT's and PY's. Doctoral fellows and project faculty, along with district or agency personnel provided supervision and site instruction. MAT's and PY's might be assigned to classrooms, teams, projects or to departments at large.

3. Over staffing. In each of the field sites more personnel from the project were assigned than is necessary to fill the vacated positions. Strategically, teams of PY's and MAT's were developed. This arrangement provided trainees with experience in teaming and the site with extra manpower that could be used elsewhere in the building, thus freeing other personnel for in-service, supervisory and other professional activities.

4. Joint recruitment and selection. Whenever possible, the project recruited directly from the field site, encouraging local teachers interested in pursuing a MAT degree to participate in the project. This permitted the pairing of experienced with inexperienced MAT's, incentives for local participation, and provided for placement of graduates at the time of selection.

The districts or agencies played an active and equal role in the selection of all personnel workers in their sites.

5. Community involvement. The creation of access and space in the community constituted a separate challenge and required a complimentary strategy. The project used a site committee strategy

TTT SITES

LOCATIONS

LARGE CITY

URBAN SMALL TOWNS

EXURBAN-RURAL

DELINQUENT-DEPENDENT

COMPREHENSIVE SPECIAL EDUCATION

PAROCHIAL

SUBURBAN

URBAN PLANNER and MODEL CITIES ADMINISTRATOR

ADMINISTRATOR

TEACHER

COMMUNITY REPRESENTATIVE

SITE COMMITTEE CHAIRMAN

SITE COMMITTEES

ADMINISTRATORS COMMUNITY REPRESENTATIVES

TEACHERS STUDENTS PARENTS

DISCIPLINE REPRESENTATIVES SCHOOL OF EDUCATION REPRESENTATIVES

DEVELOPMENT OF SITES

	1969-70	1970-71	1971-72	1972-73
Allegheny County Institutionalized Childrens Program				
Oakdale	X	X	X	(Closed 11/7
Warrendale				X
Allegheny Valley (Elementary)	X			
Braddock High School		X	X	
Bellview Elementary		X		
Canevin High School		X	X	X
Home for Crippled Children			X	X
Mars Middle & High Schools		X	X	
McKeesport Elementary	X			
Penn-Trafford High Schools		X	X	
Pittsburgh Public Schools				
Belmar Elementary	X			
Liberty Elementary	X			
Manchester Elementary	X	X		
Taylor-Allderdice High School				X
Westinghouse High School			X	X
Penn Circle Alternative High School				X

to develop more open channels between site training and the community. A committee consisting of representatives from the project, University, district, and the community was established for each site. These committees were provided a budget, given full authority over the project training components in the site, and encouraged to assume whatever responsibility they deemed appropriate with respect to all issues related to consumers. The committees took various forms and structures across the variety of sites. Their composition and characteristics are presented in the case materials appended.

During part of the project, several additional components were utilized to maximize the role of the community in the training. A model cities educational director and an urban planner developed curriculum for the TTT fellows regarding the role of community in training. In addition, these leaders and their staffs meet with various site committees to provide technical assistance. Finally, community personnel served on the program core faculties during two of the years of the project.

The multi-site strategy provided space and access horizontally across the two institutions involved in training, e.g., the University and the schools, with involvement from the communities of both. In the case of the University, its community was its students; in the case of the schools, its parents and citizens. A number of issues emerged from this strategy. They are presented below:

1. Training versus delivery of service. The tension between the needs of the trainees for new responsibilities and experiences

balanced against the needs for the delivery of an educational program was in evidence. Clearly, the first priority for the schools is the delivery of service. Consequently, whenever priority questions arise, training issues and problems take a subordinate role.

2. Training and innovation. Training is frequently linked to new processes, procedures, content or structures. Trainees bring new ideas, ways of doing things, and new materials to the field site. These may be controversial or generate dialogue or even conflict. A frequent solution is to drop the training component, rather than deal with the merits of the innovation or new practice.

3. Training and professional associations. As professional associations gain strength they speak out regarding the role of the field institution in training. The associations are reluctant to support trainees in the building, want to define roles and functions, and generally challenge internship or team arrangements which may remove a regular teaching position.

4. Training--pre- and in-service. The strategy of creating space in a field site and filling the space with pre-service training activities also present a potent model for in-service training. The excess personnel from the pre-service teams can be used to "free" teachers for in-service activities. The presence of University personnel in the building permits the development of on-site in-service courses of little or no additional cost. The realities of the site; its personnel, programs and problems, however, place a stress on the University personnel to deliver relevant in-service courses or workshops.

5. Site committees and local control. The site committee model, while providing direct community participation and control of the training processes and programs, brings into direct conflict existing political and social entities including the sites' administration and Boards of Education. Consequently, the model potentially can lead to local control of the site with all the encumbent issues and realities.

> *The promise of such gains will not move some administrators and faculty, especially those who subscribe to the supermarket view of universities. In this view, the central fact is that protestors are few and the silent, many. Ergo, "Since the large majority of the students tolerate what we are doing now, why change?" If we take the argument as stated, there can be no reply. If the first principle of education is to expend the minimum energy necessary to satisfy the ignorant client, so be it. It would be a mistake, however, to assume that "to tolerate" means "to be satisfied with, to be pleased by". On the contrary, the current of dissatisfaction and uneasiness about college curriculums runs deep, and well beyond the borders of the highly audible protest group. There are very good students who note and formulate weaknesses of the curriculum quietly instead of disruptively (so far). There are many more who note uneasily but are silent by virtue of conditioning to conformity or because of the anxiety roused by the risks of protest. It is in the light of such facts that protest becomes an extremely useful body of presenting symptoms. It is the "silent" coronary thrombosis which kills.*
>
> *Joseph J. Schwale.*

The Training Design: Characteristics

Each of the several training programs, doctorate to pre-professional is described in detail in Section III of this report. What follows is an attempt to identify and articulate many of the issues and unique aspects of the training conducted in the TTT project. Examples will be drawn from all programs, because one goal of the project was to develop parallel training structures and processes throughout the vertical levels of preparation of programs and across the horizontal components.

Recruitment, Selection, Admission

The recruitment and selection of participants for all programs was viewed as a critical function. Every attempt was made, not only to recruit the "best" candidates; but to secure institutional support for their training--thus combining staff and program development goals. In addition, the selection process was also the first step in building a training community. Since the program was year long with admission only in the fall, attention was given to selecting a group of mutually stimulating trainees. The selection process allowed for the building of teams of experienced and inexperienced teachers, those interested in traditional or non-traditional settings or a balance across any other variable(s) deemed appropriate. Three aspects of this general approach are worthy of specific mention.

First, whenever possible admission was tied to placement. Doctoral fellows were recruited from specific sites, project cities or consortium projects insuring ties between TTT and the "sending" institution. MAT's were, where ever possible, recruited from District teachers, or selected by the District as were PPY's. Only the PY's were totally "free agents". Secondly, selection was characterized by shared decision-making. In all programs, selection involved an affirmative program decision *and* an affirmative decision on the part of the field site (MAT's, PY's, PPY's and fellows) and, in the case of the TTT fellows, the sending institution. In point of fact, these decisions were often made individually, thus insuring the integrity of the institution. The applicant simply had to be acceptable to both program and institution. Third, the programs approached the selection decision from a clinical perspective recognizing that there is no one "best" predictor of teaching success. Prior relevant experiences, interview data, and observed performance with children were added to the usual academic and "paper" credentials. Selection was, in all cases, by a committee composed of members from more than one component--usually all five were represented. Selection and placement in a site was frequently by committee, often after interviews and observation with children in the specific site.

These procedures, it is believed, selected a different kind of educational personnel; one who was a "risk taker", independent and creative, and interested in the blend of content with interpersonal process.

A significant investment of faculty time was spent on recruitment and selection activities. Almost every member of the project faculty played some role in admissions--conducting interview sessions, interviewing, reviewing credentials or serving on admission teams. This investment of time appeared well spent. It was critical in building an early sense of community among faculty and students. It was the focal point around which early curricular planning and sequencing started. Finally, it was the first step in expanding and articulating values and beliefs across the three settings involved in the project--the University, the schools and the community.

Temporal Model (Sequence)

Each program developed its own sequence of experiences and activities. However, all followed a general pattern of three stages. First, a diagnostic phase. In spite of careful screening and selection, the faculty had little experience with a new group of participants upon which to build a meaningful training program. Consequently, each program developed a diagnostic phase. Curricular experiences were totally prescriptive. Common input characterized the program. As soon as the faculty and students had worked together in enough situations and around enough issues so that useful descriptive and evaluative statements about students, their learning styles and competencies could be developed, the program moved into a second phase.

The second phase, an individualized learning phase, was characterized by student learnings in any number of settings and in any number of content or experience areas. Application was initiated under careful supervision in practica or double practica situations. As students gained experience through practica in real settings, the program moved into its third phase.

During the third phase--often in an internship or externship or in field work--the student is able to conceptualize and apply skills and learnings on his/her own. The trainee is able to re-create facilitative processes and explicate a rationale for the interactions, experienced by the trainee, for others. For the teacher, it is the ability, without supervision, to design, generate, and sustain a learning climate in the classroom. For a TTT fellow, it might be the ability to design and develop productive supervisory or teaching relationships for PY's or MAT's.

The notion of phases is a developmental one, not linked to specific periods of time. In fact, in its most idealized form, different students would be in different phases at the same time. The ability of the program to respond to such differences in terms of programmatic interventions is the hallmark of an "individualized" program.

Structures

A number of structural arrangements were designed and operated in the training programs of TTT. Each is briefly identified and described.

1. Core faculty. The notion of a core faculty of four to six faculty working with about thirty trainees for the year was discussed in a previous section. This colleague group was central to the structure of TTT and was a powerful organizational management notion.

2. Competency committee. In order to assist the TTT fellows in the individualization phase of their program a three member committee (advisor and two faculty) was used. The committee worked with the fellow in the design of his/her doctorate program and was responsible for monitoring the fellow's progress in meeting the conditions of the design. Once the committee approved the design document it was sent to the doctoral program Core faculty for approval.

Individual advisors played much the same role during the individualization phase of MAT and PY training.

3. Sites and programs. Their nature is adequately discussed elsewhere. However, in this context, it should be noted that their being was to support and enhance the training function--though both might serve other functions.

4. Double practicum. The term "double practicum" is attributed to the Office of Education's Tri-University Project where University faculty spent time with beginning teachers in the same elementary school classroom. Under these conditions, something positive happened to both the faculty member and teacher.

The Pitt project expanded on this concept creating a variety of structures, where TTT fellows were simultaneously or sequentially involved with both MAT's/PY's and project faculty. Starting with the MAT/PY programs themselves as a practica site, and moving into a number of arrangements involving faculty, TTT fellows, and MAT's/PY's; the notion of a "practicum in training", the double practicum, dominated the project. These multi-level structures were created on campus, in field sites, and with community groups.

Double practica were developed for processes of teaching, supervision, advisement, counseling, management, and curriculum development. Most fellows engaged in at least a double practicum in teaching, supervision and management of training activities. These arrangements took a variety of modes and forms. Several are presented here.

a. Pre-practicum model. A double practicum arrangement where a pre-practicum (usually on campus) was used to train the fellows in a specific intervention, followed by application under supervision.

Example: use of task groups in field sites.

b. Co-teaching model. A double practicum arrangement where a TTT fellow would pair with a faculty member in teaching a course or seminar. Example: most courses.

c. Teaming model. A double practicum arrangement where a number of TTT fellows teamed with a number of faculty. Example: site teams, etc.

d. Participation of planning or management committees: A double practicum arrangement where the TTT fellow participates on a planning or management committee, assumes responsibilities, develops materials, reports, etc. Example: core faculty, site committees.

e. Observation, simulation, materials development. Double practica opportunities where fellows observe faculty in training activities, engage in simulation activities or develop materials for use in courses or in field. In each case, the fellow works closely with faculty both prior to and following the activity. Example: all phases of the project.

f. Supervisory model. A double practicum arrangement where the fellows supervised MAT's/PY's in their teaching. Their supervision was supervised by a faculty member. Similar arrangements were developed for advisement and, in some cases, counseling.

5. Internship/externship. These arrangements were developed to both assist fellows in making the transition from a direct service position to a training position (TT or TTT) in their "home" institution and to provide for space and support as the fellows moved into the

third phase of their development--that of application and conceptualization on their own.

In most cases, internship/externship required a significant per cent of their professional time (thirty to seventy-five per cent) and always involved direct professional relationships with trainees--often PY's from local teacher training institutions. The project provided periodic support and supervision, as well as, worked with supervisory/administative personnel in the sponsoring institution.

6. Peer seminars. One of the more salutary "spin off's" of the training modes employed was the frequent interactions among the trainees themselves. In many cases, trainees (PY's to fellows) learned from each other, as well as, from faculty and staff. These learnings were organized and legitimized through a series of peer seminars--especially in the doctoral program. The fellows designed, conducted and evaluated formal and informal presentations. Faculty were invited to participate as peers--several did--giving further support to both the event and the process it examplified.

Processes

The TTT project was, at one level, an experiment in seeking ways to expand the processes of training educational personnel. Hence, the entire report speaks to old and new processes applied in new ways toward the improvement of educational staffing. What can be reported here are a number of the process issues that emerged from the experiences of the several core faculties, site committees, field site teams, etc. A useful, but quite arbitrary distinction, exists between processes left implicit in the conduct of the several programs and those that were explicated. Overlap will be obvious to the reader, as will overlap between several of the structures highlighted previously and their dynamic or process qualities mentioned here.

A. Implicit processes. Much of what one learns from the educational enterprise is done implicitly and even covertly. The "hidden" curriculum or incidental learnings are powerful dimensions. TTT attempted to build a creditable congruence between its rhetoric and its behavior. Several of these implicit processes include:

1. Deductive versus inductive inquiry. An attempt was made to provide learning situations which utilized both logic systems. Since much of the trainees prior educational encounters had relied heavily on a deductive mode; early and significant attention was given to inductive, self discovery modes of inquiry.

2. Experiential learnings. In keeping with the inductive approach early in each program, a strong training value was placed on experiential learnings and opportunities. Trainees at all levels were given opportunities and situations where they could experience, first hand. From this basis and reference, descriptive, conceptual, analytic and synthetic understandings were developed. Attempts were made to use prior experiences, along with present ones, to articulate and expand the experiential bases for learning.

3. Self and professional development. The project clearly saw the development of self and self as professional as critical training processes. Opportunities to "encounter", "dialogue", and

"become" were viewed as complimentary and necessary processes with "practice teaching", "supervision" and "theory building". To enhance personal development,group process experiences, philosophy and a clinical supervisory model were employed. The project valued--and the subsequent participant report data validated--that the process of becoming a professional involves self development, as much as, professional skills, theories or techniques.

4. Intensification and extensification. An individuals program was both intensified through involvement in specifically focused projects or participation in specifically constituted groupings. Extensification of a participants program was accomplished by creating curricular options, activities, electives or selectives, visitations, etc. The development of a given participant's program for any given period of time could be intensified or extended as training needs and learning styles dictated.

5. Sequencing and pacing. The management of the order in which an individual trainee was presented with material (sequencing) and the rate (pacing) of various learnings were critical process dimensions. Individual schedules were adjusted to respond to these variables and, conversely, they were critical in the development of programs. (See above Temporal model for general sequencing).

6. Individualization. The dominate implicit process was one of attempting to model an individualized educational program for each trainee. Within the general competencies deemed necessary and appropriate by the core faculty the individualization process suggested

programmatic response to individual learning styles, rates, and outcomes. If properly conducted, each trainee might have a totally different sequence and range of learning activities with different ways of demonstrating professional competency.

B. Explicit processes. Most of the processes left generally implicit in the conduct of the project were made explicit through the following processes:

1. Staffing. The process of evaluation of individual trainees development up to and including assessment of competency was called staffing. It was a three phase, cyclic process involving student and faculty input, along with program content and response. It is predicated on the assumption that student groupings, faculty assignments and program content are periodically negotiable _at the same time_. The temporal nature of this process can not be underestimated. When faculty assignments and program content are deductively and _a priori_ determined, an individualized program is impossible.

About every eight weeks the program would stop and a few days to a week would be spent on staffing and program building. The staffing process starts with student-advisor description and assessment of the prior periods work. This data was discussed, validated, expanded in a meeting with the faculty whom the student had worked with during the previous period. In general, this assessment included data from three perspectives; personal, professional and situational/ social. It permitted the use of subjective or experiential data along with situational, objective or social data. While the mode was clinical the focus was on integrating all data from all sources (multi-criteria, multi-source) in both assessing student progress and building student programs. In collaboration, a new plan of study would be developed with reference to pacing and sequencing, intensification and/or extensification in given areas, personal and/or professional development needs, and reference to the student's learning style. Suggestions or prescriptions as to faculty and their teaching modes would be made along with required, selective or elective content goals. The advisor would take the data to the core faculty who would synthesize the input across the program and develop necessary classes, supervision or other activities. Advisors would schedule advisees into sections or groups and the program would operate for the next eight weeks.

The staffing process provided the primary vehicle for assessment of student progress, faculty contribution and content goals. It was the critical link between student, faculty and content.

2. Advisement. Critical to the success of the staffing process was the advisor and the relationship between advisor and student. Advisement was a year long committment linking student with program and providing a personal support for the trainee. Personal and professional issues characterize this relationship which necessitated a significant expenditure of time on the part of both faculty and student.

3. Grouping. The creation of a variety of instructional groups was a powerful training process. Groups could be built around

INDIVIDUALIZATION AND PROGRAM BUILDING

THE STAFFING MODEL

Instructional Program (8-10 weeks)		Staffing (1 week)		Instructional Program (8-10 weeks)
Student Schedule	P	Student-Faculty & Faculty-Student Input,Feedback,Assessment	P	New Student Schedules
----------------	R		R	--------------------
Faculty Assignment	O	around	O	New Faculty Assignments
----------------	V	Student Progress (Rate, Sequence, Emphasis, Content, etc.)	D	--------------------
Curricular Emphasis	I		U	New Curricular Emphases
----------------	D	Faculty Contribution (Instructional Mode, etc.)	C	--------------------
	E		E	
	S	Curricular Content (Emphasis, Intensity, etc.)	S	

content topics, field or community needs or personal or professional issues. Assignment of students to groups could be prescriptive, selective (choice among alternatives) or elective (student option to enroll or not). Prescription could be around content or personal variables. With respect to the latter, heterogeneous, random or complimentary learning styles were used; as well as, faculty choice, site or community needs, etc.

4. Teaming. Teaming, like instructional groupings, were a powerful training process. Selection or assignment of trainees to teams (multi-level, multi-disciplinary) to accomplish specific goals on-site or on campus provided a useful intensification process.

5. Contracting. The development of a learning contract between student and faculty to accomplish specific learning outcomes was a frequent and potent process for individualizing a student's program. Contracts were developed out of staffing and sanctioned by a core faculty or competency committee.

6. Practicum and double practicum. The various double practica arrangements outlined structurally above, in addition to regular practica, were another process for both extending or intensifiying a student's program. The several modes for practica and double practica provided clinical experiences rich in training materials. A generalized model for these experiences might be: pre-practicum--practicum--double practicum--internship/externship, which parallels the three phases of the temporal model outlined above.

7. Supervision. An intensive, clinical supervisory model

was used throughout the project. This training process provided for personal and professional development for each trainee. The supervisory process followed two prior complementary processes--placement in a field setting and observation of "on the job" performance. Both are necessary pre-requisites to the establishment of a clinical supervisory relationship which is characterized by a developmental process, e.g., sequential, over time, involving both differential and integrative phases.

8. Instructional modes. While groupings refers to those processes of building student instructional collectives, instructional modes refers to the general faculty mode of intervention. Double practica arrangements in teaching were available for all three modes of instruction. The three instructional modes used in the project were:

a. objective-cognative-theory/conceptual. The general model of faculty intervention was geared to the attainment of cognative outcomes at either an awareness or understanding level.

b. subjective-affective-experiential. The general mode of faculty intervention was geared to the attainment of cognative or personal, experiential outcomes.

c. applicative, skill development-professional. The general mode of intervention was geared toward the attainment of specific skills or the completion of certain professional experiences.

9. Mileau or psychological community. The project gestalt, or integrative strategy, produced an overall process that had a potency

in the development of educational personnel. By removing the constraints to process development (structural characteristics outlined in an earlier section of this report) _and_ providing personal supports, the project created a "sense of community" or a training mileau. This environment had an evaluative and developmental dimension in its own right.

10. Grades and grading. The issue of grades and grading was a knotty one for the project,as it is for all of education. Philosophically and pragmatically the project sought to eliminate, or at least minimize, the competitive influences of grades, while retaining the positive effects of feedback, evaluation and program response. The resulting model, staffing, was utilized to facilitate these latter, desired processes.

A number of strategies were employed to deal with the external, and sometimes internal, demand for grades. Throughout the project, students, at all levels, were block registered, i.e., sixteen credits per trimester of TTT "doctoral" or "MAT" or "PY", etc. Students received I's (_I_ncomplete) through the first two trimesters. At the termination of the program (third trimester), through the staffing process, and with sanction from the core faculty, the students received grades and transcripts were corrected to read P (_P_ass).

At the request of the student in some programs or by core faculty decision in others, a QPD (Quality Point Designation) was determined and posted on the student's record. This is a numerical value (akin to a Quality Point Average) consistant with the qualitative decision as to the level of a student's achievement as determined via staffing/ core faculty processes. The value read for example, 3.3 or above, to indicate the minimal level and range of the Q.P.D.

This process was supported by an innovative transcript. Each core faculty prepared a one to two page description of the program, its structure, processes, and content. Advisors and students would add a third or fourth page that would provide specific documentation as to the individual student's activities, achievements, and involvements. This statement was made available to the Registrar's office for microfilming in the student's record, the Placement office for credentials, etc.

Curriculum Content

The specific content of each program is discussed in the reports appended to this document. In general the entry level (T) programs expressed their content goals around the following categories.

T Content Areas

Discipline -- content
curriculum

Methods -- processes in Discipline
strategies and materials

Self becoming teacher
Personality and Development
Cognative-Affective Processes
Learning Situation and Process Management
Reading and Language Development
Diagnosis, Feedback and Evaluation
Community: Input and Experience

Each program sought to develop its outcomes in terms of professional/personal competencies stated in broad, generic terms. The achievement of these competencies, their demonstration and certification was a professional judgement of the core faculty following staffing data and recommendations.

Content areas deemed appropriate for the TT's or TTT's evolved over the course of the project. In general, the content areas out of which competencies for a trainer were found to be:

TT or TTT Content Areas

A. Training Speciality
    teaching
    supervision
    curriculum development
    training program and site management

B. Personal Development

C. Supporting Discipline and Experiences

D. Project Development and Research

Doctoral fellows designed an individualized program around these four content areas. Each program individualized with respect to emphasis on the four areas, activities engaged in, and methods of evaluation. In general, each fellow worked on a program, at a site, and with individual students (MAT's/PY's). They contracted for individualized learnings, engaged in personal development activities and worked on several double practica.

Issues in the Training Design

The discovery, exploration, experimentation and utilization of these structures and processes in a unique training design was both the implicit and explicit agenda for TTT. These are summarized in the following charts. Their selection, organization and application was one of the key issues in the training of educational personnel. It was in these dimensions that the faculty were "retrained", new fellows trained, and a new kind of teacher prepared.

PROGRAM PROCESSES

SITE CLASSROOMS

TEAMS

Departments
  Buildings
    Districts

PROJECTS

COMPETENCY COMMITTEE

Advisor
  Program Representative
    Site Representative

DOCTORAL PROGRAM

SITE PRACTICUM   PROGRAM PRACTICUM

"Doctoral Project"

Personal and Professional Growth   Special Competency

RESIDENCY YEAR

Exploration
  Analysis and Diagnosis
    Program Development

Grouping and Individualizing
  Program Staff
    Site Staff

Advisor
  Program Representative
    Site Representative

RESIDENCY   Graduate Study
            Doctoral Study

INTERN/EXTERN   Doctoral Candidacy
                Degree

PROGRAM COMPETENCIES

M.A.T. a
Experienced n Professional
Inexperienced d Year

DISCIPLINE

Content
Curriculum

METHODS

Processes in Discipline
Strategies
Materials

SELF BECOMING A TEACHER

PERSONALITY AND DEVELOPMENT

COGNITIVE-AFFECTIVE PROCESSES

LEARNING SITUATION
AND
PROCESS MANAGEMENT

READING AND LANGUAGE DEVELOPMENT

DIAGNOSIS, FEEDBACK, EVALUATION

COMMUNITY: INPUT AND EXPERIENCE

> *It is a glimpse of the obvious that in the beginning to create a setting some implicit or explicit rules are necessary by which the individuals will be governed. What this exerpt about arrangements indicated is the importance given not only to the explicit rules but to rules which would maximize candidness of opinion and protect the individual against the irrationalities of himself and others, and this in the context of acute recognition that there were major differences and problems which could not be expected to be discussed only on the level of cold reason and logic.*
>
> *Seymour B. Sarason*

Governance, Parity, and Management

One of the explicit strategies of the total TTT program was to challenge the "lock-step" pattern of teacher preparation by bringing all components involved together. This strategy goes directly to the issue of governance and decision making in training programs. It argues for alternative forms of governance; forms that give all involved in the training--producers and consumers--at the minimum a voice in the decision-making process. This "policy of parity" was a unique dimension of the TTT program.

The overall design and rationale of the Pitt project provided for an alternative governance model as integral to achieving the project's goals. Governance was viewed as a means to achieving the ends, the training of a cadre of trainers. In its generic forms, the project required:

1. Optimal conditions for process development and the training of educational personnel, and

2. A governance structure that would permit decision-making at the level of implementation by constituent groups representative of all involved.

The first tasks are administrative; that of creating conditions free of the visual constraints to process development (courses, grades, credits, requirements, etc.) by substituting a residence, block scheduled, competency-based format. Into these conditions resources (people and things--time and space) from all components were brokered and provided. Once accomplished the administrative job became one of co-ordination only! The project became an "ad-hocracy", a consortium of interrelated programs and sites--people and places. Decision-making was the professional responsibility of all involved.

The two structures around which decision-making processes were focused were the program's core faculty and the site committee discussed above. Each of these several entities developed a unique style and mode for reaching decisions. Structurally all four components (disciplines, education, school people and community) were provided for on each decision-making body and ideally all could contribute to the process.

The clear consequence of this governance structure was that each core faculty or site committee must work its way through all of the issues it deemed of import in the training of a teacher. Because of the mix of interests and backgrounds of the various members, the process of identifying and working through the various issues becomes a potent learning vehicle for all involved.

The notion of community and its role in training educational personnel was a significant one during the course of the TTT project. While many definitions and alternatives emerged during the four years, two tended to dominate. One was that the community for the University was its students; the other was that each field site had its own community. In sum, a pluralism of community emerged and each entity within the project initiated and/or responded to "community" differently.

Several issues and observations about this governance model emerged from the TTT experience:

1. Positional versus functional authority. The governance model operative during the TTT project rested on the assumption of functional authority. In short, those directly involved with the implementation of decisions should be responsible for such decisions. Hierarchical and status distinctions were minimized. Functional contributions and expertise were maximized. Under these conditions, decision-making moves toward a co-operative, consensual mode and style. Chain-of-command, characteristic of most institutions, becomes blurred into a web of authority and responsibility.

2. Decision-making as a training process. An implicit observation is that the decision-making processes, per se, is a potent training vehicle. The process of training a trainer (TT or TTT) is best facilitated by having the novice work with the journeyman in

identifying and solving all of the issues in the training of a teacher--from selection to certification of competency.

The presence of the vertical and horizontal dimensions of the project produced tensions--fields with program; doctoral with MAT/PY. These tensions produced energy; issues, the "grit", for the continual dialogue of what training of a teacher (or TT) should be. The core faculty processes, to the extent that the TTT fellows participated in them; was a significant and necessary part of their training.

3. Parity as a means or end. Central to the entire question of governance is whether parity (shared decision-making between local agencies, educators, schools and the community) is an end in itself _or_ a means to another end; such as the reform of teacher education, _per se_.

4. Project management as facilitation and articulation. As outlined above, the functions of project managers are two-fold. First, the creation of conditions and development of resources. Once this was established; the role of the manager became one of _facilitation_ and _articulation_ among the various programs and sites. Peer-to-peer and associate to associate relationships should characterize much of the nature of the way business is transacted.

5. Inter-program co-ordination versus project wide policy making. Executive, co-ordinating or advisory committees, made up of representatives of each of the component parts of the project, provide a vehicle for articulation and communication. Such bodies engage in policy familiarization only to the extent that such

policies relate to the inter-component issues.

In the case of Pitt TTT, these bodies provided general policy on matters of common recruitment, co-operative or shared resources, general training strategies, and changes in temporal, spacial and territorial conditions.

The management function is of such a nature that the manager's responsibility often exceeds this authority. Participating staff frequently are responsible to others for institutional rewards.

> *Innovation and change need the broadest possible commitment of intellectual and financial resources. While advice and technical assistance are essential before and during the life of the project, the commitments from multiple funding sources and especially from parent districts are essential ingredients, not simply as they represent broadly based intentions to stay with the program but also as they illustrate for staff and the public a budgetary and philosophical commitment to the concept.*
>
> *A Foundation Goes to School.*

Support Systems

A variety of sources of support can assist in the maintenance of any complex social setting such as a TTT project. These support systems or sources are available and necessary to sustain both the internal and external dimensions of the project. This TTT project sought to maximize some, while minimizing others.

Several were of significance in the conduct of the Pittsburgh TTT project. Their contributions were varied and of mixed influence. However, their identification and explanation are of significant consequence in reviewing the project in its totality.

A. Fiscal support. It is clear that the fiscal support from the Office of Education was responsible for the advent of TTT. Its critical role in initiating this kind of project should not be underestimated. There was little attempt to reform training processes and programs prior to the availability of federal dollars.

Fiscal support for the Pittsburgh project was from three sources: the federal grant, University support, and support from local school districts. A shared-cost budget was developed annually for the project.

This shared-cost arrangement was in keeping with the integrative strategy of the project as a whole. In addition, it provided a fiscal model which was replicatable in the several affiliated projects. The model provided for grant funds to be used for only doctoral training; while local funds supported MAT/PY training.

A few comments about fiscal sources:

1. Federal grant. The federal grant, with its fiscal and programmatic guidelines, served as the focal point around which fiscal planning was conducted. The grant provided for support of doctoral fellows, the cost of their instruction, and project support services.

The multi-year nature of the funding was of significance in the development of the project. However, the peculiarities of "forward-funding" were a mixed blessing. Early in the project, the grant award procedure was a useful and constructive press for project development. It provided a structure and format around which planning and design decisions were made. By contrast, the early termination decision provided a long "lame duck" period for the project with morale and priority problems. As is documented elsewhere, four years was not a long enough period to accomplish the major institutional and social changes projected for TTT.

2. University funds. The major contribution from university funds was through "in kind" services for some of the faculty who worked on the project and through tuition waivers for all participants. This latter support was the result of a specific strategy. The project design provided that all instruction was by project faculty only; hence, the total cost of instruction was born by the project. Tuition waivers were then at "no cost" to the university. As the per cent of university support decreased (especially in Year Four), tuition waivers were pro-rated between student and university (i.e., two-thirds tuition for PY's during Year Four).

3. District funds. The cost of the MAT and PY programs was covered by local fiscal resources. Whenever possible, the project contracted with districts to provide instruction for a number of classrooms in a specific building (site). The project received the starting teachers salary for each classroom; hence, co-operation was of no increased cost to the district.

These funds were used to provide fellowships for the MAT interns (usually two per classroom) who filled the positions. Several variations in this arrangement were used:

a. Intern fellowship. The salary was used to create two fellowships. The balance (difference between fellowships and total salary for the position) was assigned to the site budget for materials, etc.

b. Teacher differential. Some districts elected to use the total salary budgeted for the position. This was especially the case when one of the district teachers was to fill one of the intern slots created by the vacancy. The difference between a starting teacher's salary and the salary of the specific teacher (teacher's increments) would be paid to the teacher; plus the fellowship from the starting salary. Hence, a district could make participation attractive to their own staff, again at no increase to their basic budget.

c. Release time. Some districts preferred to maintain all positions, but provided release time for staff to participate in the project as trainees and, at the same time, to provide positions for other project trainees. This arrangement provided the necessary space and personnel resources at no increased cost to the participating district.

B. Staffing and personnel support. A number of arrangements were used by the project to provide for personnel from the participating components. Strategies included staffing through departments, through positions, or with individuals. Since one of the major goals was to influence the constituent parts and to pilot new configurations among these units; the project negotiated for staff either through department or position arrangements, rather than by individual committment. It was hoped that participation by component would insure for personal/institutional rewards for participation, since the unit would make the committment to work with TTT. Hence, it was hoped that a department would sanction working on a training project as a worthy faculty activity.

It was planned that participation in TTT should be a significant effort; but not total, if faculty were to keep identification with their primary unit and serve as articulation and influence links. Consequently, project faculty spent between one-third and two-third per cent effort on TTT; the balance in their regular unit.

Several examples may serve to highlight these strategies:

1. Through departments. An arrangement was reached with a department to provide a number of staff each year for the three years. The department selected personnel annually, rotating a large number of staff to work on the project.

2. By position. An arrangement was made with a number of departments to provide a specific number of staff to fill a number of positions. The department decided on the basis of positions in their department who would spend part of their time in TTT.

The difference between by position and by department is that in the former case the decision was based on established positions in the department. In the latter case, the department made the decision to rotate personnel through TTT. In both cases, the department selected faculty to work with the TTT project. Staffing was a function of each of the co-operating units.

It should be reported that this arrangement was rejected by several departments. They clearly stated that the department would not value working on TTT as an activity for large numbers of its faculty. Few, if any, would prevent individual faculty from participating.

3. By individual. Where the project would purchase a per cent of a specific individual faculty member's time. (Strategy not used.)

C. Institutional support. The University of Pittsburgh provided institutuional support and sanction for the TTT project through the acceptance of the grant. The project left institutional support implicit and developed the program inductively. At appropriate points, key committees and/or administrators within the School of Education or the University reviewed the project and its activities. The project did not seek extensive legitimization from the University or the School of Education beyond these activities.

D. Political support. The project, by virtue of its Office of Education grant, received support from the federal level. This sanction is significant and frequently served to sustain and enhance the development of the project. It clearly was of significance in working out arrangements with sites. The fact that TTT was "supported, in part, by a grant from the Office of Education", was of no mean consequence.

At the state level, the project received considerable support, especially following a program approval visitation during Year Three. The alternative MAT/PY programs conducted by TTT received state approval guaranteeing both the independence of the training sequence and certification for participants upon graduation and recommendation.

In addition, the State's awareness and favorable attention to the program was of positive support when the project was challenged by a professional teacher's association. (The issue being the project's use of internships; filling positions which might be filled by regular teachers.)

Local support through multi-district involvement provided an additional political support network. After the first year, all arrangements with local districts were formalized and contracts provided a political/legal basis for many project activities. It should be noted that the close communication linkage of area schools can work for or against project development. When issues arise, or controversies develop as the result of a project presence, other districts will hear about it and may not wish to participate in future activities. TTT experienced both.

E. Social and personal support. An additional aspect of project support has to do with the social role played by the project in the institution and the society at large. Does the project provide for support for its staff as they engage in risk-taking ventures? Does the greater society support its activities and products?

In the case of the Pitt TTT, support systems were developed for both its personnel and products. The nature of the project's processes provided significant support for faculty working in new areas, with new colleagues, in new settings. Teaming, peer interaction, common time and space, as well as, the level of involvement provided personnel support for many, though not all, project personnel.

In the greater society, the project received considerable support as its products (graduates) received jobs, increased responsibilities and personal/professional rewards related to participation in TTT. In turn, the project extended its influence in support of graduates by team recruitment and supervision during extern or internships to assist TTT fellows to move into new positions and relationships following full time training.

Issues

The nature of project support as experienced in the Pitt TTT suggest the following issues.

1. Place of the project in the institution. The relationship of the project to the existing organizational structure appears to be of significance in terms of the project's overall goals. To the extent that staff development goals are dominate, location in "neutral ground" appears most critical. However, to the extent that institutional change goals prevail; location close to institutional authority may be equally requisite. In the case of TTT, in spite of several attempts the project never lost its association with the department in which it was physically located, Counselor Education. This may have been of positive significance in the sustaining of an intensive training emphasis; and of negative significance in institutionalization efforts.

2. Expanding versus limitating conditions. The nature of support systems changes in times of growth versus times of retrenchment. TTT experienced both. Early in the project, support systems

were facilitative and enhancing to the developmental flow of the project. In times of retrenchment, they tended to precipitate conflict around project goals and strategies. For example, the support for 1972-73 forced different priorities (in-service are preference; no new fellows; institutionalize project gains rather than develop new ones) than did those from prior years and precipitated a major project re-design for the final year.

3. Component pre-occupation with itself. The nature of the four components, their major priorities being elsewhere than training, and the notion of a project as a temporary system has direct implications for support. When the situation is training and component priority--the components become a positive support in and of themselves. However, when the situation becomes training or component priorities--the component become non-supportive of co-operative ventures such as TTT.

4. Institutionalize, legitimize, or permit. What strategy should a project employ in developing its activities? TTT was faced with an unusual dilemma. If it clearly and deductively articulated all its dimensions, goals, and priorities; there would have been little need for the project, although the nature of academic or local district institutuionalization processes favor this approach. On the other hand, an inductive, process oriented change strategy is not sufficiently articulated or defined to respond to most academic institutuionalization procedures.

The Pitt project developed from the posture that to do it first--

then seek whatever legitimization or institutionalization was a desirable, possible and advantageous strategy. It was argued that the nature of the institutional processes in academics were such that the project, if it was professional and personally responsible, would not be stopped. Conversely, neither would it become institutionalized per se. This strategy appeared consistant with the projects ad hoc nature, process orientation, and decentralized style.

> *There are, however, two very different strategies for achieving accountability. Strengthening the tendencies toward central control aimed at rationalizing and ordering the system represents one strategy. Strengthening the incentives for self-regulation, by making better information available, by increasing the choices available to students among institutions, and by encouraging institutions to respond to these choices is quite another.*
>
> The Second Newman Report

Evaluation

The evaluation function was critical to the conduct of the TTT project. Evaluation was conceptualized as an on-going series of processes designed to gather information deemed useful to any aspects of project decision-making and development. In this context, a myriad of activities and structures were developed or responded to by the project. Several distinctions are useful in developing an outline for reporting these evaluative efforts. First is the distinction between formative and summative activities. The former refers to evaluation efforts designed to aid in on-going project development. The latter seeks to assess final project goals or products. Second, evaluation activities were conducted regarding individual trainees, project components (programs and sites), and the project as a whole. Third, some activities were conducted by insiders; others by outsiders. Evaluation activities related to training are discussed elsewhere in this report. Activities related to the project as a whole, or related to its components are discussed in this section.

External Evaluations

The Pittsburgh TTT project responded to six separate evaluation activities sponsored by external agencies. In five of the six cases, the primary unit for evaluation was the national TTT program--with the Pitt project being only one component. However, in each case the project did receive feedback and useful data--though not always in a form or at a time when it could play a significant role in project development. Each activity is briefly described and its impact on the project assessed.

1. Proposal review and contract negotiation. The annual proposal review process and subsequent Plan of Operation negotiation processes were a significant evaluative activity. These processes provided both a structure and criteria against which project development could be explicated and reviewed. A unique aspect of the TTT program was the fluidity of both the structure and processes encouraged. Furthermore, the inductive nature of the total venture provided a unique backdrop against which to develop evaluative criteria and supportive data.

Proposal preparation was viewed as an aspect of project development. Many were involved. The dialogue around proposal preparation was one dimension of the TTT experience; the discovery of what is good teacher training and what is a good teacher trainer. Each component developed its own goals, structures and processes against the criteria for a TTT project. The project proposal developed as an integration and synthesis of these component parts. This process provided a focus for intensive project review and planning for the next year; formative evaluation in its generic sense.

2. University of Virginia. The TTT program contracted with the Center for Evaluation Research, University of Virginia to conduct an intensive evaluation study. The Center employed the Discrepancy Evaluation model in conducting its study. These evaluation activities were tied to the proposal preparation for Years Two and Three which added import and Office of Education sanction to the evaluation activity. The initial phase, design, was, in retrospect, both a useful and distractive activity. Useful in that it forced project and components to carefully articulate project goals, activities, etc. Distractive, in that the amount of return to the project of useful data was negligible when compared to expended effort. The subsequent demands on the project tended to reinforce this conclusion.

3. Abt Impact Evaluation. Abt, Inc., conducted an Impact evaluation for the Office of Eduction/Bureau of Educational Personnel Development. The Pittsburgh TTT project was selected as one site for an intensive site visitation. The Abt team visited all aspects of the project during February 21-25, 1972. This activity, other than providing the project with an opportunity to explicate and demonstrate its activities, was of little import to the project.

4. RMC Evaluation. RMC, Inc., conducted a comparative/descriptive evaluation of all EPDA projects. The assessment was descriptive and quantitative in nature. It requested the project to provide detailed data on most aspects of the project.

The activity was of modest impact on the project and the data across projects provided a normative data base for use in project development.

5. L.T.I. Site visits. The site visits sponsored by the Leadership Training Institute/TTT were of significance in the development of the Pitt project. Partly because of fortuitous timing, and partly due to insightful visitators, the team provided valuable information for project planners, as well as, precipitated significant adjustments in the project design. The L.T.I. site visits provided the project with criteria for evaluation and professionals with whom to dialogue about the project in juxtaposition to the criteria. The plan to have a follow-up visit several months following the initial visit was both influential in confronting project personnel with dealing with visitation recommendations and in keeping TTT criteria central to project development.

6. State Department of Education site visitation. During Year Three, the project, through the School of Education, requested program approval for the four PY/MAT certification programs. Again, this mode of involving both the development of a descriptive statement of program goals, strategies and resources; followed by an intensive visitation by a team of professionals proved to be a

potent evaluative model for project improvement. The site visit provided for a useful dialogue between evaluators, project personnel, and explicated criteria.

Internal Evaluations

The project conducted or sponsored a number of activites designed to provide formative or summative evaluative information at critical points in the project's development.

1. Project milieu. Many of the processes characteristic of the TTT project were so interrelated and managed so as to produce a milieu that was responsive to continual program improvement. The project conditions (full time, year long residency, field and competency based) and structures (core faculty, site committees, etc.) produced a unique environment that was both in need of and responsive to evaluative data. All project participants became critical producers of relevant information, and consumers of information from others. Evaluation; experientially based, subjective, and focused around professional judgements, was critical to the conduct and development of the project.

2. Project Evaluation. The project employed an evaluator to assess the project from a historical-clinical perspective. The evaluator spent a number of weeks over the course of the last two years of the project as a "participant-observer" to all aspects of the project.

In addition, the project provided a participant-writer for each program component during Year Three. These writers kept an on-going description of program activites which served as additional data for the project evaluator, as well as, project managers. These reports are presented in this document.

3. Doctoral fellows activities. Over the course of the project a number of the TTT fellows conducted a variety of assessments and evaluations of most components of the project. A number of fellows conducted clinical, survey, interview, or questionnaire studies of sites, programs, supervision, etc. Most of these were utilized in the planning for subsequent years.

In addition, a number of doctoral dissertations examined various aspects of the project. These are listed in the Appendiced materials.

4. Follow-up studies. Beginning evaluative data regarding the employment of project graduates was gathered through follow-up studies. Each year an attempt was made to collect employment information and general reactions to training experiences. These studies are reported elsewhere in this report.

Issues Regarding Project Evaluation

As with other project processes, evaluation activities provoked a number of issues around which unanimity of opinion is lacking.

1. Program versus project evaluation. The whole-part issue was prevelant both at the project and component levels. The project was evaluated against criteria designed for the total TTT program. Similarly, components were assessed against total project goals.

However, in both cases, the whole was viewed to be more than the sum of the parts.

2. Evaluation as a management tool. Many of the evaluation activities provided useful data for management decisions--though frequently the data arrived too late or in a form that was of little use in decision-making. Conversely, some activities were neither of value as a management tool or in assessing perceived project strategies or goals. This was frequently the case with the externally directed activities.

3. Changing goals and priorities. Any project with multiple goals and strategies provides unusual problems for assessment or evaluation. When the project design is inductive and process oriented, rather than deductive and product oriented, problems are more acute. Some argued for clear goals and strategies at the outset; others argued that a *post hoc*, naturalistic methodology was the only appropriate evaluation strategy. In either case, a different *project process* would develop as a result of the *evaluation process* selected.

> *Its success might best be measured by its ability to elicit energy from all components involved in the training of educational personnel and support processes and activities that permeate, are beneficial to, and are adopted by each component.*
>
> *University of Pittsburgh TTT Project*
> *Plan of Operation*

Project Outcomes: People and Places

The University of Pittsburgh TTT project had two parallel goals. First, was the training of a cadre of doctoral level personnel to assume positions in the educational personnel development (training) enterprise. The second goal was the development or improvement of programs for educational personnel training. Project outcomes are reported around these two broad goals, as well as, some documentation of multiplyer effects, spin offs or serendipitous outcomes.

People

The outcomes of a training project can be reported in a number of ways and assessed against a variety of criteria. The number of personnel involved from the four components is one index as to the success of the project. Successful completion of training as reflected in degrees awarded or certificates granted are such a set of data. Placement in appropriate positions are another. While these are neither exhaustive quantitatively or qualitatively in nature; they are, none the less, valuable benchmarks. Data for each will be presented in summary form. A more detailed presentation appears in the technical appendixes.

Personnel Involved

The TTT project at the University of Pittsburgh was staffed by sixty-seven (67) different University faculty from two Schools, Arts and Sciences and Education. Two (2) mathematics faculty, six (6) social science faculty and fourteen (14) members of the English Department participated. School of Education involvement included: four (4) Elementary Education faculty, six (6) Reading and Language Arts faculty, twenty (20) from Secondary Education and fourteen (14) from Counselor Education and one (1) from Educational Administration. Some faculty held joint appointments or changed appointments during the course of the project

In general, faculty from all ranks were involved including seven (7) professors, nineteen (19) associate professors, eighteen (18) assistant professors, and twenty-three (23) research fellows, instructors, etc. Department chairmen from the four School of Education departments participated.

In addition, administrators, supervisors and faculty from ten local educational agencies were invovled in the project involving more than sixty-five (65) professional staff members

Community representatives involved in the project were recruited from the field sites. Forty-seven (47) community persons were directly involved in the TTT project.

Personnel Trained

A. Doctoral Fellows. One hundred and four (104) individuals were recruited and selected for a full year or more of graduate level training under the auspices of the TTT project as TTT fellows. Because of the changing admission, recruitment and selection criteria, only fifty-seven (57) were recruited at the doctoral level. The balance were twenty-five (25) M.Ed. fellows (1969-70) and twenty-two (22) second year Experienced Teacher fellows. Data is reported for these three recruitment groups in Appendix B. Data for the total project follows.

With respect to completion of the full year of training, one hundred three (103) fellows successfully completed three trimesters of full time work. One fellow resigned during the year for personal reasons.

Of the one hundred and three fellows; thirty-four (34) received a M.Ed. degree, seven (7) a Specialist Diploma, and twenty-four (24) the doctorate. An additional thirteen (13) are candidates for the doctorate degree with anticipated August, 1974 graduation and twenty-seven (27) more are in the incipient stages of project research having finished all course work. Some fellows received more than one academic degree.

Fifteen (15) fellows have expressed no interest in pursuing graduate training beyond the full year in the project. The distribution of the one hundred and three fellows by current highest degree is presented in Table I.

TABLE I

CURRENT HIGHEST DEGREE FOR 103 TTT FELLOWS**

HIGHEST DEGREE STATUS	N*	%
PH.D.	24	23.3
CANDIDATE FOR DOCTORATE	13	12.6
OVERVIEW STAGE OF DOCTORATE	27	26.2
SPECIALIST DIPLOMA	5	4.9
M.ED.	18	17.5
CREDIT ONLY	5	4.9
FELLOWSHIP YEAR ONLY	10	9.7
NO DATA	1	.9

* Total N + 103 ** As of May, 1974

Current professional responsibilities, are a second criteria for assessing project personnel. Follow-up data for the one hundred three TTT fellows was gathered and categorized using the system designed by the University of Virginia, Center for Evaluation Research evaluation of TTT to assign educational personnel to levels (Personal Taxonomy). Twenty-three (23) fellows are currently in TTT positions and fifty-five (55) are in TT positions using this classification scheme. In sum, seventy-eight (78) of the one hundred three fellows are currently in teacher training positions. The balance were either teachers or counselors (20) or no data was available (5).

Current level of functioning for the one hundred three fellows is presented in Table II.

TABLE II

CURRENT* LEVEL OF FUNCTIONING FOR 103 TTT FELLOWS

CURRENT JOB STATUS	N	%
TTT UNIVERSITY	13	12.6
TTT LOCAL EDUCATION AGENCY	6	5.8
TTT OTHER	4	3.9
TT UNIVERSITY	10	9.7
TT LOCAL EDUCATION AGENCY	37	35.9
TT OTHER	8	7.7
T	20	19.4
NO DATA	5	4.9

*AS OF MAY, 1974

Twenty-three (23) of the fellows are in higher education, sixty-three (63) in local educational agencies, and twelve (12) in other education agencies (state, professional associations, etc.).

Using pre-TTT job versus post-TTT job data, it was possible to assess the impact of the project in assisting participants vertical job movement. This data is presented in Table III. Twenty-one (21) fellows moved from T or TT jobs to a TTT position. Thirty-five (35) more had TT responsibilities following the project, while T prior to participation. In addition, three (3) TTT's and nineteen (19) TT's were trained and returned to comperable positions.

TABLE III

VERTICAL JOB MOBILITY PRE-POST* TTT FOR 103 TTT FELLOWS

PRE-POST JOB	N	%
TTT -- TTT	3	2.9
TT -- TTT	6	5.8
T -- TTT	15	14.6
TT -- TT	19	18.4
T -- TT	35	34.0
T -- T	20	19.4
NO DATA	5	4.9

* AS OF MAY, 1974.

With the largest number of fellows working in local educational agencies, a word should be said about state certification requirements. The TTT project was designed as a doctoral project and did not address itself directly to the problems of certification and local educational agency based training personnel. This provided some problems for fellows. However, several were able to work with their State certification offices to have TTT project work count toward supervisory or administrative certification requirements and/or engage in additional work in a specific department at Pitt relative to certification. This was elected by a number of fellows and they achieved certification as a Reading Specialist, Principal, Supervisor of Guidance Services (K-12), or general Supervisor.

B. MAT's and PY's. During the conduct of the project a full year of training was provided for one hundred twenty-eight (128) MAT's and one hundred twenty three (123) PY's. The distribution of these participants by year and subject area is presented in the following table (Table IV). Attrition was minimal, as is reported in the table below.

TABLE IV

MAT AND PY TTT PARTICIPANTS

	1970-71			1971-72			1972-73		
	Enrolled	Finished		Enrolled	Finished		Enrolled	Finished	
		Deg.	Cert.		Deg.	Cert.		Deg.	Cert.
English:									
MAT's	24	24	24	20	20	20	13	12	12
PY's	40	40	40	24	24	24	10	8	8
Social Studies:									
MAT's				17	17	17	16	15	15
PY's				21	21	21	4	3	3
Mathematics:									
MAT's				11	11	11	6	6	6
PY's				14	14	14	0	0	0
Science:									
MAT's				17	17	17	5	4	5
PY's				4	4	4	2	2	2

Careful follow-up data was collected for the MAT's and PY's from 1971-72 and 1972-73. These data are summarized in the following Table V. More specific data in tabular form appears in Appendix B. As reported in Table V, a high per cent (64/60%) of project graduates were hired in teaching positions. Graduate education was another alternative for PY's. The higher per centage of 1972-73 graduates employed in "other areas" documents the effects of the "teacher surplus" in the Pittsburgh region.

TABLE V

COMPARISON OF EMPLOYMENT STATUS[1] OF MAT

AND PY STUDENTS FOR 1971-72 AND 1972-73

(Data in Per Cent)

	MAT		PY		TOTAL	
	1971-72	1972-73	1971-72	1972-73	1971-72	1972-
	N=65	N=41	N=63	N=17	N=128	N=58
Teaching & Teaching Related	78.8	68.2	49.2	41.2	64.4	60.3
Student	6.0	7.4	33.3	17.6	19.4	10.3
Employed - Other	6.1	14.6	3.2	29.4	4.7	19.0
Unemployed	6.1	7.3	4.8	0.0	5.4	5.2
Discontinued/ No Data	3.0	2.5	9.5	11.8	6.1	5.2

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[1] Follow-up four months after program

C. PPY's. A total of twenty-nine (29) students were admitted to the Pre-professional program between June, 1970 and September, 1971. Of these individuals, sixteen (16) have received bachelor's degrees and another two anticipate receiving degrees in the 1974-75 academic year. Because of the way the program was structured, six students were terminated when their employing institutions terminated contractual relations with the TTT project. Students continuing in the 1973-74 academic year have done so with their own funds.

	1970-71	1971-72	1972-73	1973-74***
New Enrollments	11	18		
Continuing Enrollments		7	16	10
Continuing with Next Year	7	16	10	5 (2 active) (3 inactive)
Moved to PY Program	1			
Graduated	1*	4	6	5
Terminated	2	5**		

* Became MAT following year
** Includes one who was counseled out of the program
*** May, 1974

D. In-service Training. In addition to major pre-service training activities, the TTT project provided specifically designed, field based, in-service training for many of the faculty of the site schools. Seventy-four (74) school faculty received three credits of in-service instruction through the TTT project.

Finally, countless hours of informal professional development activities were provided by TTT faculty, fellows and participants. Curricular projects, instruction design and student groupings were developed and piloted in all the field sites.

Places

The parallel goal for the University of Pittsburgh TTT project was the development or improvement of programs for educational personnel training. The project moved to achieve this goal with two, clearly articulated strategies. One was the design and conduct of a number of alternative MAT/PY teacher preparation programs as part of the TTT project. The second was to gain institutional committment to develop alternative training arrangements in a number of cities through targeted recruitment of TTT fellows and externships following training at Pitt. Both of these strategies were employed and resulting achievements can be documented.

Place - Pittsburgh

As is documented throughout this report and most specifically in the case studies of the training programs conducted and field sites operated, the TTT project did design, develop and conduct alternative educational personnel development training programs, specifically:

-- new doctorate (now called the Inter-departmental Interdisciplinary Program) in education.

-- an alternative Master's degree program and Professional Year sequence in English Education.

-- an alternative Master's degree program and Professional Year sequence in Social Studies Education.

-- an alternative Master's degree program and Professional Year sequence in Mathematics Education.

-- an alternative Master's degree program and Professional Year sequence in Science Education.

-- a Career Ladder-Pre-professional Undergraduate sequence.

-- The State approved these latter five programs for certification of graduates as educational personnel.

-- ten local educational agencies co-operated in the project; contracting for work from project personnel, supplying staff and resources, and in sharing in the training responsibilities.

-- Community input was facilitated through Site committees, special curricular materials and resources, and personnel.

Place -Satellite or Consortium Projects (The Team Recruitment Strategy)

The second way the TTT project sought to influence the programs for training educational personnel was through both a targeted institutional involvement and team recruitment for TTT fellows. The project sought to achieve *institutional* support to engage in innovation or development activities for its training programs prior to the selection of fellows. With institutional involvement assured, the selection and training of personnel could have a more specific focus. Furthermore, *teams*, rather than individuals, were recruited, trained, and returned to the project or consortium city. The teams would have members form one or more local educational agency and one institution of higher education involved in educational personnel development. County or state educational department personnel were added where possible. Where the strategy was employed over a number of years, team selection and training was sharpened to meet both institutional and personnel development needs. The following chart illustrates the cities, years and numbers of fellows recruited.

SATELLITE/AFFILIATED PROJECTS

(TEAM RECRUITMENT STRATEGY)

	1969-70	1970-71	1971-72	1972-73
Pittsburgh	11	5	9	4
Rochester/Greece	4	6	4	---
San Diego	---	5	5	---
Berkley	2	3	---	---
Cleveland	4	3	---	---
Houston	4	3	---	---
Philadelphia	2	---	---	---
Albuquerque	4	---	---	---

It is clear that the strategy did not work with uniform across the project or the several cities. Factors which tended to reinforce the strategy include the level, intensity and location of institutional support. Situations where the administrative officers placed the development of training programs high on the institutional priority list tended to maximize the TTT opportunity. In a similar vein, the quality of institutional support for the fellows selected varied--as did the individual fellow's committment to the institution. Where both were strong, the strategy reinforced the interaction and accentuated program development activities. The Greece/Rochester and San Diego settings; along with the local Duquesne/Carlow/Canevin High School arrangement tended to be the most productive with respect to the development of programs.

In the other settings, the strategy provided training for specific individuals, but little co-ordinated program development.

Multiplyer Effects - Spin-Offs

The Pittsburgh TTT project had, from its enception, an explicit strategy for multiplying project effects--the cities and satellite project strategy. As reported above, the strategy focused around project-institutional agreement to develop training programs for educational personnel in a given city, the recruitment and training by Pitt TTT of multi-agency teams who would return to the city to pursue the development of training programs in that locale.

Case materials documenting strategies, successes and struggles of this strategy are appended for Greece/Rochester/SCUNY-Brockport, San Diego and Duquesne/Carlow/Canevin.

It is clear that TTT extended its benefits, indirectly, through a variety of ways and in a variety of places. It is also evident that "cause and effect" relationships beyond project boundaries can never be clearly established nor can ways of assessing such serendipitous outcomes be defined. To wit the following are listed:

-- the TTT site at Canevin became linked with the EPDA/PPS project at Duquesne University.

-- San Diego's TTT activities became linked with Project POINT and the EPDA/PPS project at the University of California-San Diego.

-- the Greece/Rochester project has developed into a consortium for teacher training, pre- and in-service.

-- the State of Pennsylvania approved private schools as field sites for teacher training (Canevin).

-- the notion of field sites is pervasive in the Secondary Education Department and is being expanded across the School of Education.

-- IIP degree is available for any doctoral student.

-- the characteristics of a competency committee for building doctoral degree sequences has been adopted by the Department of Counselor Education.

-- the University of Pittsburgh Teacher Corps Project has adopted many of the modes of training used in the TTT project.

-- achievements in nine sites are documented in the site reports in another section of this report.

-- English Department now offers a seminar on teaching for doctoral students and teaching assistants.

Issues

In retrospect, a number of issues are clearer as one views the accomplishments of the TTT project around the criteria of people and places. They are cited so the interested reader can view the results of the project in juxtaposition to these issues.

1. Staff or program development. Training educational personnel is a different process than the development of programs. True, the two are inter-related. Yet, training, per se, need never be related to anything other than the individual trainee's needs, skills and development. In this context, recruitment and placement can be idiosyncratic processes.

Program development is a political/social process involving inter- and intra-institutional committments. Personnel and staffing are key processes, necessary but not sufficient. Combining the two, a strategy of this project, produces interesting--often conflicting--values. For example, training may result in helping the individual become more mobile--at the expense of institutional committment. Conversely, the institution may see training as an opportunity to subtly "terminate" personnel. TTT experienced or contributed to both!

2. Credentialing. The problem of credentials for educational

training personnel was mentioned above. The project did confront the issue of credentialing for teachers directly and challenged the role of the educationists in totally controlling the process. The project, through the core faculty model, gave this authority to a larger--though still University dominated--group. This issue will continue to pervade the education professions.

3. Institutionalization. The development of a permanent, new structure for educational training was never a goal for TTT. From the outset, TTT concentrated its potency around the processes of training. It did create an "ad-hocracy", a new kind of educational structure which would be more responsive to the growing realities of the educational enterprise--need for co-operative training, articulation across the institutions involved in training, and through the levels of educational personnel, and attention to people and programs.

Where such accomplishments should be institutuionalized is an interesting question. In the University? In local educational agencies? In the community? With participants? In the ability of all to move more freely across the institutional boundaries and through the levels?

One of the clear outcomes of this TTT project is that it is possible to build and operate such a system--an "ad-hocracy".

"physically an "ad-hocracy"; essentially in process"--

TTT in Retrospect

The material presented in the preceeding portions of this Section, as well as, in Sections III and IV of these reports seek to describe and explicate the several structures, processes and outcomes of the Pittsburgh TTT Project. What follows are a few impressions and notions about this project; its effects and learnings that might be transferrable to other places and times. These are, of course, the impressions and recommendations of but one participant who lived with the project from but one perspective. Others will view the TTT experience from a different reality. In fact, one of the most potent legacies taht TTT might leave the University of Pittsburgh is that it started a full and meaningful dialogue on the processes and issues of training educational personnel.

Throughout this Section, frequent reference has been made to dual goals of the TTT program--the training of educational personnel and the development of graduate programs. The inter-relatedness of these two goals should be evident. The improvement of the quality of educational personnel available for employment is related to the changing and improving of undergraduate or graduate programs. However, such programs can not be changed or improved without a serious re-conceptualization as to the nature and scope of educational personnel development processes. People and place are the issues.

The 'People' Dimension

Notions about Training Educational Personnel

The training of educstional personnel can best be viewed as a developmental process. As such it must be viewed as dynamic, rather than static; individualized rather than standardized; and involving all developmental processes (cognitive, affective, experiential, physical) not just the intellectual. Consequently:

1. An educational training program is more than the sum of its parts. The development of educational personnel involves more than a sequence of courses and practica situations. It should involve the integration of teaching modes with learning styles; clinical settings with campus resources; personal growth opportunities with professional experiences. A training program builds a "psychological sense of community" where the processes of becoming a professional educator are the primary agenda for all involved; faculty, students and staff. TTT demonstrated that a professional training program must be different from a discipline-oriented undergraduate or graduate major.

2. No one component has all the parts--all must be involved. Content without process for delivery is of no use in the classroom. One mode of delivery is ineffective when attempting to respond to a heterogeneous learning population. Training devoid of consumer

assessment is at best naive, at worst dangerous. In short, no one component--disciplines, educationists, the schools or the community/students--have a corner on the processes of training. All must be involved. TTT has demonstrated that when the involvement is concurrent and the decision-making consensual a different and more potent training results.

3. Training must involve both personal and professional development. Content knowledge and skill development are necessary attributes for an educator; but not sufficient. The processes of becoming a professional educator must involve the discovery of self as teacher (or administrator, counselor, etc.), a personal confrontation with ones own and other's values, needs, and attitudes; along with an interration of these personal processes with professional skills, strategies and learnings. TTT demonstrated that careful recruitment, selection and admissions, intensive advisement, clinical supervision, developmental curricula and frequent assessment are necessary ingredients of an educational training program.

4. Vertical role models and interactions are necessary. TTT demonstrated the value of face-to-face relationships among individuals in the vertical hierarchy of academia. Undergraduate and graduate students can learn from each other, experienced from in-experienced teachers, pre-service from in-service teachers, doctoral students from MAT's, faculty from doctoral students, etc. Structures which enhance these vertical relationships contribute to a "psychological sense of community" and a sense of peer-as-resource; both critical to

training a professional educator.

5. Alternatives are critical. The availability of real choice for students and faculty within training programs and among such programs is critical. Different students require a different sequence of experiences. Faculty require alternatives in mode and place for providing their professional services. Different field settings, themselves requiring alternative staffing and organizational patterns, suggest alternative training patterns. TTT demonstrated the necessity and value of alternative programs, as well as, the difficulty in trying to impose a "standardized" training model to all personnel or places.

6. Time. TTT demonstrated the necessity and advantage of full year, full time professional training.

On the basis of the TTT experience it is RECOMMENDED:

- that all pre-service training of educational personnel be conducted in small, intact programs,
- that such programs be designed, conducted and assessed by a core faculty comprised of at least discipline, education, school, student membership, with significant input from parent/community groups; especially around field activities,
- that whenever approximately thirty trainees are recruited, a new program and core faculty be established, thus insuring alternative programs, and
- that the pre-service programs for instructional personnel

should be a five year program, building on three years in the College of Arts and Sciences, a fourth year with significant field experience in at least three kinds of educational settings, followed by a fifth year with a year long internship in a specific field setting.

Notions about In-Service Training

TTT became significantly involved in in-service training for educational personnel, especially during its last two years.

1. In-service is an extension of pre-service. TTT demonstrated the advantages of linking pre- and in-service training. In this regard, many of the concerns and issues related to pre-service apply to in-service as well. All components should be involved. Alternatives are desirable. Personal development is as necessary as professional development. Finally, vertical relationships and articulation are neceessary supports.

2. Field-based in-service. A desirable and productive structure is to tie in-service to pre-service activities in a field site. Pre-service trainees can both profit and contribute to in-service activities developed in the field. Economy in faculty time, along with the vertical articulation among staff, support this arrangement. TTT conducted a number of meaningful and creative field-based in-service activities.

On the basis of the TTT experience it is RECOMMENDED:

- that in-service activities involving both pre- and in-service trainees be made available in every field site,

- that in-service activities involve faculty or staff from the disciplines, education, schools, students and parents, and,
- that in-service activities jointly developed by University and school personnel respond to real school based problems.

Notions about Training Trainers

TTT was a response to the observable fact that most of the people involved in training educational personnel wer, themselves, trained to do something else. What characterizes such a trainer was an explicit question addressed to those who participated in TTT. Several observations about training trainers include:

1. Transcending the 'place-bound'. The ability to move horizontally across institutions and places, developing meaningful relationships in each, is one such characteristic of a trainer. The availability of space in all components and experience in moving across these institutional barriers was demonstrated by TTT. Such skills and experiences are one necessary element in the development of trainers.

2. Experience in training activities. The TTT project highlighted the inter-relationship between training programs as an experience base for training trainers. The necessity of involving the potential trainer in the full range of training activities--from recruitment to placement--was demonstrated by TTT. Just as a lawyer

can not learn his craft apart from the court; a trainer needs access to an educational personnel development program.

3. Availability of role models--people and place. TTT provided for faculty and doctoral fellows to work together, to move across the institutional barriers, and to model training roles for each other. What is needed to train trainers are role models which _value_ training, _perpetuate_ training processes in their professional activities and will facilitate the apprentice in _recreating_ these processes for himself, first under supervision, then alone as a journeyman to provide a potent base for training trainers. Futhermore, TTT conducted training programs as 'role' models in and of themselves.

4. Inter-disciplinary, Inter-departmental Program (IIP). TTT demonstrated both the necessity and desirability of an _ad hoc_ degree program for trainers. The management of such a degree program should be through a committee from different disciplines and departments. School personnel can play a significant role in such programs. Each student should develop his/her own _ad hoc_ degree program and committee.

On the basis of the TTT experience it is RECOMMENDED:

- that the IIP degree structure and process be an available option for doctoral students in the School of Education, wishing a degree with a major as a teacher educator,
- that an internship in IIP involve experience in more than one institutuion and involve more than one training

responsibility, and,

- that IIP students be members of core faculties in every educational personnel training program in the University.

Notions about Faculty Role and Development

In a real sense, TTT sought to provide staff development opportunities for University faculty and school district staff. Through the specific conditions created by the project, faculty were challenged to try out new skills, develop new learnings while expanding and sharing old, but productive, insights. Several observations might be noted with respect to faculty role and development.

1. Participation required time, energy and risk. Involvement in a TTT project demanded a different and often increased amount of time, the expenditure of a different kind of psychic energy and a higher level of personal risk than is the norm for a University faculty member. This was the consistant conclusion of all faculty, participants and the observation of many non-participants. Involvement in training activities and programs is a different kind of faculty assignment than teaching per se, scholarship or research, or service. It requires more time and collective involvement thus demanding more 'informal' contact hours. It tends to precipitate more inter-personal (and intra-personal) conflicts which demand time and energy to resolve. The movement across institutional barriers and into different settings is a physically and psychically draining process.

2. Necessary supports and rewards. The TTT project was relatively

successful in providing a variety of supports for faculty involved in the project. At least adequate material, social and personal supports were created and maintained during the four years of operation. Institutional support for the project as an entity was maintained. What became increasingly unclear over the course of the project and in the ensuing year is how faculty involvement in TTT would be assessed in the University reward system. There is growing evidence that participation in TTT, while personally rewarding, was and will be viewed neutrally or, in some cases, negatively with respect to tenure and promotion decisions.

3. "Ad-hocracy" as a model for staff development. The conditions afforded by the ad hoc organization of the TTT proejct proved to be a potent model for the development of new insights, skills and constructs on the part of some faculty. The shared decision-making, colleagual relationships, and the frequent confrontation with the realities of a variety of the educational settings became viable conditions for faculty development. The year long committment permitted risk-taking, trying new instructional arrangements and the opportunity for helpful feedback and assessment.

4. Alternative programs and opportunities. TTT demonstrated the advantages that alternative programs provide with regard to staff development. The availability of choice for faculty assignment provides both an opportunity and a press to expanded faculty roles and skills. Furthermore, it provides both a content and a process whereby faculty could develop and test alternative skills and learnings.

5. The reality of the schools. The TTT project confronted each participating faculty member with both the realities of the school classroom and the heterogeneous nature of the schooling enterprise. TTT engaged a number of different kinds of schools. Faculty had to deal with these differences and to respond with alternative training strategies and interventions.

On the basis of the TTT experience it is RECOMMENDED:

- that faculty development can best be accomplished within the context of an ad hoc organizational structure where temporal and risk factors can be minimized,
- that attention be given to the demands of training in the educational personnel fields (or Human Services) in terms of time, energy and personal risk taking,
- that staff development in education can best be achieved when it is linked with the realities of actual educational programs,
- that different educational programs require different kinds of training for educational personnel; hence, different faculty roles, styles and skills, and
- that those responsible for faculty personnel decisions either give equal priority and weight to participation in training activities as is given other faculty roles or so communicate the lesser institutional value placed on the training of educational personnel.

The 'Place' Dimension

TTT was very much concerned with the development of graduate programs and redesign processes. TTT build and operated a different kind of organizational structure--an "ad-hocracy"--an alternative to the more bureaucratic structures characteristic of schools and universities. Several notions about place; both structure and processes, are worthy of emphasis.

1. Implicit values. TTT employed the following values, often left implicit in project rhetoric, but made explicit in the design of major processes:

a. personal and individualized value, i.e., that programs, experiences, processes should all support and maximize individualization in all areas, rather than standardization in any.

b. professional responsibility for decision-making, i.e., that faculty working directly with students in settings are in the best position to make all decisions about all phases of the training program, and that students should play a full and responsible role in their own professional training.

c. residence study is preferable to credit study, i.e., where a student brokers for a significant amount of time, into which an individualized program is developed, rather than complete a pre-determined number of courses or credits.

2. Organizational values of an "ad-hocracy". In conducting its redesign activities, TTT built an organization, an educational "ad-hocracy", around two basic values:

a. goal and belief in the three implicit values explicated above, and,

b. task orientation, i.e., the conduct of an educational training program and the delivery of an educational program. This organizational structure is in contrast to the more prevalent "bureaucratic" model of schools and orientations which are built on position, hierarchy and history. An "ad-hocracy", as TTT created it, was a temporary, primary organizational structure which tended to maximize an individual's contributions to the task at hand, with little reference to position, status or previous history. Personal and professional competency, energy and involvement, along with a committment to the above implicit values were central to the organizational development process. Finally, there was little doubt over priority questions (teaching, research, services and program development). Training and the development of training programs was of highest priority to the project.

3. Redesign strategy. TTT found a number of characteristics to be critical in the redesign process. These included:

a. functional organization,

b. task orientation,

c. heterogeneous membership,

d. few "givens",

e. fixed temporal dimensions, and

f. primary group.

TTT employed all of these in their annual redesign efforts. Each program was functionally oragnized around a specific task. Faculty composition was heterogeneous with few, if any, structural, process or content "givens". The program was for a year, with faculty and students working in a small, face-to-face group on campus and in the field. Decision-making authority was at the point of implementation with all components present and participating.

Each program was confronted with the realities of teaching, as well as, training. Furthermore, while drawing on the past, a program was not bound by it. Each year with a new group of students, a new core faculty, and new field sites, the program redesign process was repeated. The process of redesign became central, with the actual product a secondary goal.

On the basis of the TTT experience it is RECOMMENDED:

- that the redesign process developed by TTT be given careful review and analysis for implementation in other situations where program redesign overtones are desired, eg., School of Education reorganization, new projects such as Teacher Corps or Social Reconstruction, etc.,
- that redesign activities always be tied to a real group of students, faculty, and settings to avoid redesign efforts becoming only an intellectual exercise, and
- that faculty responsible for redesign be expected to engage in implementation or vice versa.

4. Notions about inter-departmental, school relations. TTT

brought about ample opportunity for expanded inter-departmental and/or school relationships through faculty interactions. In the preponderance of instances, mutually co-operative relationships were established and maintained among faculty from differing persuasions. Many of these have persisted beyond TTT as a project. However, TTT was unsuccessful in achieving meaningful and lasting co-operative relations between departments as entities or sharply improving relations between schools. The basic values toward educational personnel development held by these entities prior to TTT remain--perhaps intensified. The general competitive relationship among these units appears to persist at an organizational level. As was discussed above, faculty working in TTT received institutional support and encouragement; yet, in the final analysis, institutional rewards--administered through the department and school structures--have not favored involvement in this, or any other, educational personnel development project.

On the basis of the TTT experience it is RECOMMENDED:

- that the nature of departmental or school support of faculty who chose to work on educational personnel development projects be explicated, and
- that the Office of Education make actual institutional rewards given or denied to faculty working on previous educational personnel development projects a matter of record in all future grant applications.

5. Notions about inter-institutional relationships. Inter-institutional relationships were developed in two ways; through field sites and through satellite/consortium projects. Both arrangements used by the TTT project were generally constructive and facilitative in achieving project goals.

Characteristic of local field sites were (a) contractual relationships for delivery of service and training, (b) a variety of kinds of educational institutions, and (c) involvement of field personnel on core faculty, site committees, etc.

Satellite/ consortium projects provided for recruitment/placement foci and points of dissemination of project structures and processes. Inter-institutional relationships frequently supported and enhanced program development activities.

On the basis of the TTT experience it is RECOMMENDED:

- that contractual arrangements including shared resources and costs be the basis for the development of field settings. Such arrangements should provide for full status for some staff in both institutions and joint responsibility for achieving the goals of both institutions, i.e., University plays a role in the delivery of the educational programs for the school, while the school plays a role in the delivery of training for University students,
- that the Office of Education make University responsibility and role in the actual delivery of an educational

program in the school a desirable and necessary component of future educational personnel training programs,

- that the strategy of inter-institutional arrangements appears to have unusual potency as an institutional change strategy and the potency of this model using sub-contracts, consortia arrangements, etc. should be expanded, and
- that the Office of Education clearly support multi-year awards, only on a phase funding basis, whereby local support by the close of the project cycle equals grant support,
- that the Office of Education make involvement with shared training a priority criterion for funding applications.

6. Notions about a 'place' for training trainers. The notion that there is a need for a place to train trainers is still a viable idea! TTT just began to scratch the surface of this need. Teaching associates and fellows, as well as, faculty from across the University who plan to spend part of their professional life as teachers might well spend part of their graduate training in such a place. Clearly, no one unit, school or office has such a priority. The idea of an _ad-hocracy_ of some form into which individuals might spend some time around training issues was demonstrated by TTT.

On the basis of the TTT experience it is RECOMMENDED:

- that some form of _ad hoc_ organizational structure be created annually whereby interested faculty, and potential faculty might explore the issues of training. Such an entity should not "belong" to any specific unit, yet it should serve all units by taking time from all and having a place in all.

7. Accountability through diversity. TTT used two processes to facilitate accountability, choice and information. The availability of real programmatic choices for faculty and students accompanied by information about choices are processes for maintaining responsible professional practice and establishing program accountability. The free-market approach, with support following program, is a viable and workable alternative to centralized and standardized accountability models. TTT demonstrated that alternative programs for training educational personnel are possible, viable and will be supported. The placement of TTT graduates, sanction by the Pennsylvania Department of Education, support by field schools, and adoption of this strategy in other places speak to this issue.

On the basis of the TTT experience it is RECOMMENDED:

- that the alternative program strategy be supported and expanded,
- that faculty be free to annually select into or out of such programs, and
- that the loss or gain of student enrollment be a significant factor in deciding institutional rewards and support.

TTT in Retrospect

TTT attempted to create alternative institutional processes, to elevate different values and perspectives to positions of implementation, and to demonstrate that the training of educational personnel is a different activity. When assessed against the criteria that these issues and values are now in "good currency" and have a place in the decision-making arenas of any of the four components, the project may be found wanting. When assessed against the criteria that these issues and values were explored and that individual participants from all components experienced the implications of them in their personal and professional lives, the project may be found fulfilling.

It is a matter of historical record that the national TTT program was the unwilling victim of the political forces of the times. As of this writing TTT is still "in process" at the University of Pittsburgh--though, to this writer, much of the energy is directed toward priorities other than the training of educational personnel and the development of graduate programs.

SECTION TWO

The Evaluator's Report

"Notes from a Participant-Observer"

Joseph Palaia

June, 1974

Notes From An Observer-Participant

Joe Palaia

"Where does history begin when what is being written is neither biography nor case study but rather a retrospect that may faintly illuminate a darkness?" That question so poignently asked by James. A. Wechsler in In A Darkness has a bearing in depth if not in genre to this study of the University of Pittsburgh TTT project.

TTT spanned the years 1969 through 1973, from planning through change to ending, though not through effect.

As the history of the Pittsburgh TTT effort is written, all who had to do with the project must be troubled, in the exposition of it, by the same class of frustrations Wechsler experienced.

There is no evident apt way but a holistic one in which the account can be framed.

Certainly, at the time, I was nagged, almost always, by the sense that more could be learned about any and all elements of the enterprise if my interviews, observations and other data and research efforts were conducted more forcefully. So, a less iffy product was available. Standing opposite that, however, was another sense which said probity in what was being sought called for a kind of look at the project that, while seemingly lacking in depth and readily attackable by investigative purists would present a word picture of the endeavor which would carry to the reader a flavor that would enhance chances of understanding the effort better in its nature. I chose that route.

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"What you see is not what you got."

(Appologies to Flip Wilson)

If all the programs funded and fostered in Education by the national government of the United States of America were listed by title, vertically, and by objectives, horizontally (no,no, it is not that they would stretch from Seattle as the axis to Baja California in one direction and to Duluth, Minnesota in the other-- though they might) in a mathematical matrix, entries would be many in both directions. As common aims, goals, objectives, hoped for outcomes, or whatever were checked off, evidence would be overwhelming that, like the races of Man, there are differences, but these are insignificant when weighed against the similarities. Put differently, the names change but the game remains essentially the same. The purpose of mentioning this is not to decry the efforts. Far from it. Different words and terms mean different things to different people at the same time and in different times. So, names must change. But, from a particular point of view, how to teach and what to teach, with varying emphases on each of these at differing times, comprise the matter of the enterprise, and the word enterprise is meant to be singular form.

One element of the enterprise was the TTT Project of the University of Pittsburgh.

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I was as skeptical of them as they were of me at Pitt at the beginning of my endeavors there.

A paraphrase of something in Jonathon Christopher's, No Blade of Grass describes it best for me -- They threw me looks, half tolerant, half exasperated.

There was no escaping the feeling that I was an "outside expert". I had it. They had it. And it stood in the way. But, there had been enough of them (outside experts) before I arrived to have properly dulled the participants' senses of either apprehension or elation at being looked at. That served me and them well.

From the beginning I strove for informality in dealing with all elements of the Project. It was a good thing to have done. Any attempt to formalize the effort at any level would have failed. As it turned out, I learned a good deal more about the participants and the Project than might have been expected because of that approach.

It put me into the position of being what it was that I was scheduled to be, an observer-participant.

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My statements are based on first hand visits beginning in September, 1971 and ending June, 1973.

There were twelve visits which totalled forty-two days. The longest of these was six days, the shortest, half a day.

I had access to anything that had been written from the proposal writing stage through the end of the project.

Participants were encouraged to speak or not speak with me as they saw fit.

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"...*Buy a Program, mister?*"

In no area is there greater need to work to understand some of the feelings as well as the workings of the Pitt TTT project than in the arena of the comings, goings, and doings of the Hill Building. My introduction to the Washington, D.C. based things governmental relating to education came in late 1963, shortly after the assasination of President John F. Kennedy while our family undertook a kind of pilgrimage to Washington, D.C. generated by that tragedy.

Looking back at it now, it can be viewed as my "Everybody-would-like-to-drive-a-bulldozer" phase. The final look has not yet come.

Over that period of time I have been exposed to, participated in, helped design, and heard of tens of projects and programs aimed at bettering the American system of education over its full range, i.e. pre-school through graduate school, and along with that, continuing education. Never have I been confronted and/or confounded by an educational enterprise of the complexity of that of TTT. It was almost as if one could see, without actually seeing, that bulldozer of the days of the beginnings of the War on Poverty (a term I objected to by reason of feeling that, given the national government's penchant for acronyms, it might die aborning with the Italian segment of the population) that I hoped for, but did not see then. It would have been no surprise to have indeed employed such a machine to some good use and end in a project of such variety. This is not said tongue in cheek.

It was a characteristic of the endeavor to utilize any means thinkable to perform the jobs that participants saw as needing to be done. Most often these pursuits took the form of courses, spawned who knows where, but given form and process in the Hill Building, second floor -- all of it. And, in that kind of generative ethos one could not tell the players from the spectators without a program. Even having the program did little to mitigate the confusion of the outsider. In language, garb, verve, demeanor and technique there was a oneness that was unique, nice to see, but very difficult to deal with in the reporting of it.

Deference to authority had, it seemed, no visible role in the enterprise. What struck one, in emphatic terms, was the anthill-like quality of action -- a surface scurrying about that seemed to ask the question, "Whither?", but coupled with product which emanated remarkably whole and significant.

Other places had game plans too; that is much of what the Hill Building was all about -- it was the site of the game plan. Not only the site but the force of it from conception through evaluation. Yet, if one could have extracted the sum of the knowledge about TTT to be found, throughout the enterprise, in the Hill Building, and from the amalgam of contradictory traits that comprised the membership, it would not have been likely that the sum of such knowledge would have produced a picture of what was the Pitt TTT. It would have to have fallen short of what actually took place

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Through the looking glass, or through the mirror?

In the guidelines for TTT, nationally, and long before the advent of TTT, ills of sundry parts of American education as they related to efforts, small and massive, of the National government addressed need for "institutional change" throughout the range of the education of Americans. It seems not at all strange then to find this bent as a touchstone of what the inauguration of TTT would provide, as one of its elements, at the University of Pittsburgh, and at the institutions, educational and other, which were to see, feel or sense what was going on in the Pitt TTT effort.

As is true in most areas wherein human actions take place around a common theme -- music, football, TTT, or whatever -- Pitt, too, would be affected.

In hardly any sense should recounting of parts of the institutional change I saw at Pitt be taken as their message to others with whom they came into contact, "We do it this way, go and do you likewise." Nor was it if they could do it, no one else could. It seems to be, rather, a bit of each. Not, though, with the Messianic thrust that it would take to match the verve with which they lived TTT; nor with an arrogance which might be ascribed expectedly, to the second. More simply and positively, it was evident that they had pride and enthusiasm for the things they were doing and they felt that it might be a good and possible thing for some of their doings to be circulated.

With that as necessary prologue some views of institutional change need be addressed; if this element of the Pitt TTT is to be put into a frame that communicates somewhat, the spirit as well as the scope of that category of the project.

A number of summative-like evaluations were endured by the Pitt TTT. That word "endured" is used descriptively with no imputation of negativism meant. They were, in fact endured but not suffered -- endured in the sense that many came to see, saw, but saw not what the participants knwo was there and felt could not be part of an evaluation. There is mention of forty examples of institutional change at one of the sites, twenty-three at another, and thirty-one, thirty-nine and twenty-one at the others. Those were found and recorded. They may be handy to use for all sorts of purposes -- further funding, justifications for monies expended, and for a variety of other reasons. But they do not, in any significant sense, capture what institutional change was all about, or rather, about hardly at all, in the Pitt TTT.

Most of the evaluation efforts were probably worthwhile. They sought significant answers to pertinent questions, they provided more than little insight to the TTT practitioners at Pitt, and assuredly they supplied input for elements to be incorporated into Office of Education programs extant and to come. However, in terms of spirit they are, and have to be, ineffectual as measuring inner beauty or inner anything. So, that kind, the important kind of institutional change is not what is to be found in much other than the behavior of the participants. That behavior, not in meetings where recountings of happenings were the order of what was to be done, but rather in casual conversations or quips that had an intensity of measure of a thing well done that would not begin to have been considered for measurement in most formal evaluation schemes or documents. By that might be meant a statement, very satisfactorily uttered that a PY had said something that was taken into account by a Ph.D. because of the PY, and a sense of change that was characteristic of what one element sensed or hoped that TTT was all about had been accomplished, or at least begun in that particular instance. I know that kind of thing happened over and over again in my dealings. Be that as it may, I'd find myself with a sheepish grin on my face as the result of having seen something that most probably should have been obvious to me from the beginning. That, always in the company of the person who caused it to become evident and he or she couldn't seem to resist, in a somewhat smug, but charming wasy -- without a word, in most cases -- to communicate "That outsider learned something from me!" That happened, in spades, in the Coordinator's meeting I've mentioned elsewhere in this report. So, much of what constituted institutional change in this venture took that form. Necessarily it was taken, for that was the very nature of the project.

What went along with that is of extreme importance. Once a project participant sensed that an outsider could indeed learn (credentials were more often a liability than they were an asset _vis a vis_ an evaluator's being accepted) that outsider literally came to be part of the project. Put better, the statement should read "...part of that part of the project." It was evident that the whole could not be sensed or seen (not even by those most involved in it, I'd venture). Each part of each part held one or more of the keys. Hence, no nuance should have ignored or passed over lightly if any significant evaluative judgment was to come forth.

Essentially the accurate recounting of this phase of Pitt TTT is unwriteable in terms that lend themselves, or the concept, to data based illustrations. That, unless ways could be generated or found to query participants in a fashion, or mode, content based, that would lead from the effect to the cause -- a difficult task, but possibly a significant one for other studies as well as this one. Put more simply, it's a rather "Here you are. Howdja get here?" mode of inquiry.

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Although a prevailing disposition on the part of an onlooker might well have been to rank the Pitt TTT near the bottom of the list of adherents to the principle of conduct stating, "Order is Heaven's first law" there was a surprising effectiveness to be found in the structure of the program. Vehicles abounded through which the voice of every person could be heard, needs addressed and modifications, if needed, or deemed to be needed, could and would be accomplished. These were within and among all levels. They had a peculiar strength to them, these vehicles, which might well have existed by reason of the fact that they had an ad hoc character to them that made each and all entities of the program know that what was being done was important. Beyond that, they knew that their concerns would be addressed somewhere, at some time. They didn't know when or what, or even if anything, would come of it; but they did know that they would be heard.

That attempted explanation misses the truly significant element that existed. The action took place at discrete levels which were related while seeming to be not related. Put into a case context, it would be that whatever one distinct level would judge to be the problem, process, or whatever, saw completion and resolution in that arena. But, beyond and above that, in heirarchical terms, there was a level, or levels, most often not spoken of or thought of, which would ameliorate, change or solve the problem with which the initial group dealt. As mentioned, these activities existed from the Pre-professional through the Directors' levels. In each, there never appeared to be any uncertainty as to what was being addressed. There was clear communication vis a vis terminology. And, a cooperative aura was almost always present.

Perhaps, or probably, this exposition purveys an air of the onlooker being pleasantly surprised at what went on in the various elements of the Pitt TTT. If such does not come through, it should, for that had to be the response of one who was not a participant. Such a position came to be the apt one because of the gulf between what the venture appeared to be and what it acutally was.

These are not expressions denoting the existence of a person, or persons, who had the comprehensive picture of the whole of the project. In some cases that position was ascribed to top staff, but, clearly, was held by none of that staff. What was actually the case was that there was an underlying faith in each of the individuals in all the segments that was buttressed by the studied belief that the venture was designed in a fashion which anticipated each person in it could meet minimum expectations by oneself and go easily and effectively beyond that level by cooperating with others.

This would seem to ascribe a kind of genius of design to the effort. These statements do not deny that as a possibility; indeed, that genius may have been the hallmark of the endeavor. Provocative as that might be as an approach, it is more propitious to view in terms that have less an air of mystique about them.

The enterprise devolved on the simple expectation that participants, in that ambience, would produce if they wished to. Most did.

Paradoxically, what was attempted relative to teacher training, and the steps to be taken to that end, smacked of forthright aversion to the status quo as it exists and has long existed in higher education. That segment of the rationale of the Pitt TTT was straightforwardly expressed. Time and again in the literature of the enterprise there are specific references to; no grades, no courses, no credits, no fragmented time schedules, no short term involvements (I have never come to an understanding of the meaning of that one), no specific predertermined goals and outcomes, no large classes, and no requirements unrelated to teaching and teacher training. These, seemingly, flew in the face of many of the tenets and practices existing in the traditional nurturing of educational personnel, particularly of teachers, hence violated parts of an educational milieu that had been treasured, utilized, propagated, improved, but, more importantly, maintained. In most cases there seems to be an almost preciousness connected with the customary enterprise.

The paradoxical quality of the Pitt experiment lies in the fact that, despite the apparent casting off of things traditional, a good deal of the enterprise resembled that which is to be found in the more traditional approaches. There was a "freeing up" as regarded the trappings, accompanied by a solidifying of the substance. That last might be better put by saying that the focus was on the task to be performed. But, factors that have long been identified as being of need in the education of educators, or in the education of mankind, (peoplekind?) were respected and retained.

The recognition existed that knowing how to teach does not make the trainee teacher any more than knowing what to teach does. Content and method were both recognized as needs for there to be the complete teacher as product. However, the approach was intrinsically different.

It was not ordinarily said, "You are in a program which will provide you with content know-how, and other accoutrements to the end of making you a better teacher than you would have been had you been trained traditionally." Far from that was the fact of the matter. In almost every case the trainee, be he preprofessional or Ph.D., was an actor in a grand scheme -- thought out or not -- which used a constant cause and effect bombardment of give and take between learner and trainer that benefitted both.

Essentially, as I saw it in the Pitt TTT, the approach was different, and the product relatively superior. Probably one of the most fruitful experiences I had in dealing with the Pitt TTT was a coordinators meeting held February 16, 1972.

I remarked, snidely, in writing my notes, that it was characterized by: being begun promptly on schedule, strict use of Roberts Rules of Order, and professional language. I went on to say, in the same vein, that it dealt with:

--long range planning,

--inter-disciplinary concepts,

--institutional change,

--a complete understanding of the where of all elements of the program, how they inter-related, and where they were headed.

Those attending were Campbell, Smith, Anderson, Meade, Hughes, Horgan, Dilts, Baird, Connors, Ruch, and someone is listed in my notes as "Prince Valiant." I still don't know who that was. In that meeting I found there was no special plan for visitors. Visitors came to see them and saw them as they were. No frills -- rather an honest way to approach dealing with any sort of observer. The observer who cared -- who really wanted to know -- could ask and perhaps be provided with answers. Others (the most often appearing kind, I think) made judgments pretty much based on their preconceptions of what a program or a project should be (by their own standards) and in many cases viewed the effort as something other than an effort, and summarily wrote it off as, at best, ineffectual. In some cases judgments were not that generous. Most of the holders of attitudes of the sort that viewed the Pitt TTT as a less than fruitful venture were from the disciplines. It is not that disciplinarians cannot, by the nature of their normal enterprises, cope with the relatively free-wheeling and apparently non-hierarchical format of such an endeavor -- they can, and some do. It is rather that the TTT was one of a number of efforts designed to cause breakaways from the *status quo* of traditional university endeavors, and when confronted with something *THAT* far removed form what they considered to be the norm they, in fact, could not make the effort to cope. In a sense, this means that ill will was not the actor in the scene. Shock was.

It is one thing to say, and to set out to act in a fashion that takes into account that in these times ones discipline should most probably be approached in its teaching as recognizing that other disciplines not only exist, but that they bear on ones own to the extent that the word "inter-disciplinary" need not be a "no no" even in deed, and inter-disciplinary offerings among related disciplines do and should exist in the mind and in the work of some of the most eminent practicioners in the social sciences and the humanities. Solopsism is hardly the hallmark of the good scholar any more if indeed it ever was. Teachings, writings and other elements of scholarship actively recognize and point out the existence of, and even the need for consideration of, other disciplines. *Related* disciplines, that is. So, the historian recognized influences of geography, economics, psychology, anthropology, et al on history. These, though, are seen to be the related disciplines. For the most part, and in most cases, education is not to be found among them. That for a variety of reasons ranging from the position most often taken that education is not a discipline -- sincerely held -- to simple smugness. It is no wonder, then, that it can be held to be shock that lay at the root of many of the negative criticisms of the Pitt TTT project.

It is one thing to take as part of one's load the teaching of a course in the School of Education but quite another to walk into what gave the appearance of being, at best, quasi-organized chaos which characterized (on the surface) the nature, practice, and participants of all elements of this TTT endeavor. It was with this feeling and outlook that the snide characteristics mentioned earlier were written.

Looking back at it now I can see that that list was both a hope of what I wished to find, but even more, a downright prejudgment of what I expected to never happen in that meeting.

It turned out to be one of the most professional meetings I witnessed over the life of TTT at Pitt as well as other efforts nationwide. Before the meeting ended all of the topics had been addressed to the degree they were clear (even to me), had been studied, had been modified in such a way that new approaches were designed and weaknesses were weeded out, and further modifications were provided for. Beyond that there were handouts that, though rough in form, dealt with the problems that were being faced, problems that might emerge, recruitment and the attendent problems of that. There was additionally a full blown discussion of the hows and whys of what things were happening throughout the range of the project; citing names, places, events and what were all pertinent considerations of the now and after parameters of the project. The range and depth of the knowledge and concern of all that, was discussed most professionally, sensitively, and was comprehensively ordered.

I mention this, in the fashion I do, in this form, and in this place in the reporting of an outsider's perceptions, to the end of attempting to provide readers of this report with a modicum of; on the one hand, apparent characteristic chaos throughout the project -- in its people, in its process, in its products -- while it was, in reality, well ordered, well managed and most fruitful.

Regretfully, it is beyond my ken as well as my expositional talent to communicate the true flavor of the project, even as I judged it.

Nevertheless, that same meeting provided even more! While an observer might feel, and even sense, that a good deal of the spirit of the culture of the Pitt TTT -- its very ethos -- was if that observer had the acumen to proceed to the right place to talk with the right person while asking the right question; the built in ambiquity would become evident. But, within that, and the concomitant lack of structure, a fecund educational endeavor's product, or at least part of it, emerged, and began to take shape.

So, I came to see a causal force character beneath the guise of casualness and disorder that I heard (and, early on, sensed) to be generic to the Pitt TTT.

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"Three cheers for process, a modest hurrah for content"

Emphasized, in most cases by understatement, throughout the comments was an ingenuous elan about the entire Pitt TTT project. This caused casual observers to feel, given that spirit, there must be something going on which smacked of non-substantial educational worth.

Were one able to get into the real self of an occasional participant that suspicion might be confirmed. However, as is true in efforts across a wide range of fields; experimental exercises do tend to bring out kinds of ingenuity in people they themselves may not consciously know they have. This seems to have been the experience of most of the TTT participants. Almost always this was communicated in a spirit of surprised pleasure.

Added to that, the reticence which communicated a kind of uncertainty, when broken through, frequently uncovered a protective effort that had been undertaken by segments of an element -- usually lower ranking in the hierarchy -- that spoke of skepticism in their own minds that the leaders really knew where the project was headed.

None of these was singular in its importance, and there were more to go with the ones cited, but, taken together they illustrate a charming and effective network of cooperation.

There were a number of failures caused by numbers of factors. But even these, for the most part, and somewhat uniquely, did not culminate in lasting deleterious effects. People who did not experience success at a level satisfactory to themselves or to the project still seemed to have a pro-TTT position relative to the merits of the effort as well as to the part they had played in it. Most often failure (more accurately, lack of significant success), was recognized and accepted as a consequence of insufficient motivation or perception on the part of the individual to do the amount of work required to perform the tasks requisite to success. This is an important element of the project to address by reason of the fact the translation of that was, most often, "Had I chosen to do it, I could have done it." And usually the choice was made on a priority basis that said whatever was done in place of the requirements

That's blunt, but I think it's apt. Like most of what I'm doing, this is difficult to document, but I'm sure it's there.

A good deal of the fault, I believe, lies in the fact that most often process was the main thrust of the effort. Content was a pathway to follow, and not much more than that.

Now, let me couple that with an inherent problem of the disciplines themselves.

Here, I want to stick to history, pretty much. That, although it can be applied much more broadly.

To my knowledge, no one has ever made a _solid_ case for having history in the schools. I don't even want to qualify that for now. When I say it though, I'm talking of the Bigelows, Fentons, Brownswords -- good solid historians who, beyond history, care about teaching. They can justify history _qua_ history to a fare thee well, but not the other. How you tell it, how you get the kids involved is really the big thing. Put differently, history is carried along by the process of the teaching of it.

Out of all that had to come all kinds of frustrations to all kinds of people, but most particularly to those who care about the disciplines. So, when met with a movement carried by the Horgans, Ruchs, Guthries, _et.al._ of the world of Pitt they're not about to capitulate to process to the detriment of their discipline. Yet, they're faced with a carrot and stick approach that may make a helluva of TTT was a decision of choice on the part of the participant.

Characteristically, the Pittsburgh TTT participant was one who had something extra. One had to, in order to succeed. It was a something those who chose the participants imputed to the individual in almost every case -- it was not necessarily in shining evidence. It may well be true that this exists in us all -- qualities that we will bring forth given the appropriate set of circumstances within which we can operate. A corollary to that would be that since most people do not rise to be something beyond what is expected, circumstances circumscribe their inherent capacities. A priori, it is accurate to state that Pitt TTT'ers exceeded their own personal expectations.

I have written, "I suggested that the teachers observe the fruits of their work. NO WAY say they."

I haven't even a good hunch about what that means, but I do know that they evidenced a good deal of frustration over a topic of a meeting that dealt with content (ethnic studies, Eruopean studies, Asian studies) and took an hour to talk about. To straighten that out, they went into discourse and discussion of the "concepts of the Social Studies." My glorious notes I'll quote, "Fuzzy to me." At the end of the session I wrote "Still fuzzy, but taking shape." I think I came out of that and a number of other "content" discussions thinking something like, "Three cheers for process, a modest hurrah for content (if it fits in)."

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a lot of progress for their discipline -- it might even "learn" them something about how to better purvey it. That last needs going into even more. A good deal is known and understood about the ways in which process works and how it ties into learning theory. There is no question but that if process stagnates as an effort, so too, will whatever the content to be taught. But process cannot stand alone. Examples are always needed and these must come from content.

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An area of more than passing interest is what was happening at the various levels that made for something other than a unified approach. Chapter and verse would help in going over this one, but I'm precluded from doing that by virtue of my ignorance of fact.

Here it is in hunch form.

When I say "other than a unified approach" there is to be no imputation that a unified approach was either desirable or undesirable -- it is value laden neither way. In talks with Ruch and Guthrie it was made quite clear to me that, from its inception, the Pitt TTT was primarily a doctoral training enterprise. The other elements were there to the end of better preparing doctoral candidates. Some things got in the way of that, I think. It's good they did.

The directors, at this level said to themselves "We are involved in a training program unique in the training of Ph.D.'s" That has a nice ring to it. I think they were right as they saw it.

Now let's go down the line.

The doctoral candidates probably said to themselves, and to one another, on occasion, "This is all for us, WOW!" Probably it wasn't said to them that way. It would seem to me everyone in the program would want to feel that he/she was as important to the program as was any one else. So, it should have gone that way all the way down the line (I hate that hierarchy thing, but guess it has to be used.) through the students at the various sites. It did! "Spin off", I think it's called in some circles.

Those doctoral students got tied up with the students at the sites, and so it went from level to level.

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Notes on Notes

Some addenda items floated around in my head. There is no particular order to them, nor are they fully thought out. These few that follow came from some reading of my notes and some of the things that were in a folder that I hadn't read for some time.

Site Committees. I have almost nothing on them. The one experience I had was one evening at the Home for Crippled Children. Memory tells me that my talks with people about them (site committees) left me feeling that they accomplished little.

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Parity. No comment -- well, hardly any. Early in the game I looked for it because it seemed to me to be a big word in TTT. Never received much information on it. Did gather sense that so much else was going on that needed doing that parity was pretty much ignored. Sensed, beyond that, and probably more importantly, it was a real puzzler which hardly anyone knew how to attack.

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Non-Acceptance. That has to do with TTT and other elements. I hadn't actively thought of it for some time until I came across a dittoed "Evaluative Report..."

Nine points are made in that report. They say more between the lines than they do outright. From the "between" reading I get the sense that TTT was too loose for the customary tenor of the site's regular program.

To put it in deathless prose form, I would say they felt that TTT was mostly "wrong" through being too revolutionary and having not enough substance, BUT maybe there's something there after all, AND we really aren't satisfied all that much with what characteristically goes on here.

Echoes of that come thru at other sites too. Memory (not notes) tells me that there were greater political problems at some sites than at others.

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In looking over my Penn-Trafford notes, I came across evidence of some of the antipathy toward TTT. It is difficult to actually pin down, but can be said rather accurately through stating that I got the feeling that several of the site coordinators felt that a number of people were not exactly jumping at the chance to have TTT represented in their schools.

That puts me in memory of an earlier experience I had in the care and feeding of educational improvement programs. Programs that is which have in mind a somewhat tempering of the status quo. It was in Washington, D.C. the winter of 1963. The was the Cardozo Project. The effort was designed to use recently returned Peace Coprs volunteers. In my notes it appears as a digression -- an overstatement too, I fear, but it does make a point that was paralleled to some degree in the Pitt TTT. "The Peace Corps kids could get no cooperation from the "old-timers" who had, for years, put up with all kinds of crap, and who rather loved their suffering."

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There was a session I sat in on in which the major topic treated was the problem of translating what had been done by participants working on a "no grade" arrangement to grades.

This came out of a Social Studies Core Faculty meeting held January 10, 1972. My comment to myself on the notes I took says "Difference between no grades and QPA seems to be mythical." That isn't deathless prose, but it does pose yet another problem that needs addressing. Just how far can thumbing one's nose at status quo go?

The context in which that action took place, had to do with three students being given post-Baccalaureate status. It seems that the QPA was needed for that.

Had it to do, I wonder, with Pitt graduate school, another department, another school, or what? If it was, as I sensed it to be, internal, then my perception of "mythical" would hold. If it does, something should be said about the difficulty of implementing the plans upon which the project was based, i.e., "no courses, no grades ...."

We have dealt with this before, I believe, but it does point out, on the one hand, the need for conning, co-opting and stuff like that, while, on the other, the difficulty of living with the myth. This is a sticky wicket. It's an almost "Here's the dream vs. Here's the reality."

If more elements of the dream are to come to fruition, then procedures have to go as if the dream is the REAL ballgame. BUT, in our heart of hearts we know it really isn't. However, the limits cannot be pushed without that belief. It's tricky -- tricky to explicate, but even more so to live with. And, I think that the Pitt TTT had to live with it to be able to do what they did.

They did it well.

SECTION THREE

The Discipline's Report

The English Department in TTT

Edited by Christopher Rawson

This "report" is a pot-pourri of viewpoints from seven of the twelve English department faculty members who worked in the Pitt TTT program from 1970 through 1973. It does not pretend to account for the variety and scope of the program, or even of our own part in it. It does not differentiate between the three years of the program, each of which involved some new personnel and structures and procedures, and (of course) new students.

What this report does present is a variety of emphases and memories, from the different perspectives that we have, one, two, or three (depending on how long we stayed with the program) years later. We have preferred this loose structure to a more thorough one, because it would take a book to tell the full story of our involvement in TTT.

The story is important for two reasons. First, the local one: we were essential to the program since we were the only liberal arts department willing to participate significantly over a long period of time; in some ways our participation was fuller and more energetic even than that of any part of the School of Education except for Counselor Education. Second, there is the larger dimension: in this report we show ourselves to be thoroughly representative of the struggle in English departments nationally to keep the study of language and literature at the center of both professional and liberal arts education, to foster the humane attitudes that we think essential to the processes of reading, studying, and discussing literature, and (not incidentally) to prevent ourselves from becoming the academic backwaters, the Classics departments of the year 2000.

Most of us think that TTT was a success at Pitt, and that our department had an important hand in that success. We were clearly ready and looking for a program like TTT before it came along. Probably only in such a circumstance can there be true co-operation between Education and the disciplines, given the biases and divisions we all know so well. But even though TTT may have succeeded partly because we were already part-way there in our concern for students, for process, for interdisciplinary co-operation, still TTT helped us move much further and faster down that road.

Bridging Gaps

Robert D. Marshall

(In 1972 there was extensive talk in the Pitt College of Arts and Sciences, especially among the Humanities departments, of restructuring the Freshman year. What follows is excerpted from a memo describing the first full year of Pitt TTT, sent to the then Dean of the CAS: it seemed then, and still seems, that the interdisciplinary and inter-institutional nature of TTT made it a valuable model for many sorts of innovation, especially as it provided structural patterns--along with a corollary emphasis on process and students rather than on content and teachers--that would help break up the tyranny of the abstractly and arbitrarily defined "disciplines" in college education.)

The following is my description of the TTT program for you. It has a couple of biases: first, because it's my explanation and not someone else's and, believe me, the program is so complex that one person might supply a very different focus and emphasis from another; secondly, because I have your purposes particularly in mind. The two biases, in a way, are very much one, because most of my purposes for having been in the program are similar to the ones you've expressed for considering these changes in the Freshman year. Of course I do not mean to suggest, in the enthusiasm that I have for the goals of the program, that we have been successful in accomplishing all of them.

TTT has had one principal purpose, and that is to bridge the various gaps in the secondary education teacher-training process. The typical student teacher studies the liberal arts discipline in one part of the college or university, receives training in the methods of teaching that discipline in another part, and experiences practice teaching in still another institutional system situated in a particular community--usually with a minimum of communication among those four systems despite the fact that they usually have far different sets of educational, institutional, and social values. The student teacher, in short, is usually caught in the middle of a radically discontinuous process at the most vital stage of the training program. (Obviously, I mean to suggest the parallel of the freshman in college, raised in a particular community, educated by a school system and its teachers, introduced then--in just as radically discontinuous a process-into a system of learning that has values and methods and emphases that are far different from anything in previous experience.)

In its simplest form, our TTT program was designed to take representatives of each system and, with relatively few strings attached and with the money to provide the overstaffing necessary for flexibility and teaming, throw them together not into a think tank but into a real teacher-training program. One of the basic goals of the planning was to provide as much variety as conceivable: in staff, in students, and in school settings. In each kind of high school, TTT teams, consisting of every kind of staff and student, had primary responsibility for several classrooms.

To demonstrate the variety of emphases possible in such a complex arrangement, let me point out that, strictly speaking in terms of the federal guidelines, the key component in the variety described above was the group of doctoral students. They were the Teacher Trainers who were being Trained in the program. In this sense, the rest of the program was designed as a laboratory for them. The federal government, through the U.S. Office of Education, has for many years been trying in a variety of ways to determine the most efficient and effective means of causing change in the educational system. The TTT program was still another effort to reach ultimate efficiency, to get the most change for the federal dollar, by abstracting to still another level, i.e. by working with the people who are going to be the teacher-trainers in colleges and in boards of education.

In another dimension, and with another but not uncomplementary set of emphases, were the nine of us from the English Department, the Liberal Arts component as we were called. We were in the program, I would say, for two reasons: on the one hand,we were convinced that we were indeed teacher-trainers whether we wanted to be or not, for the Secondary Education English majors (not to mention the College majors who would in time teach), the future high school teachers of this area from which we get our freshmen, were spending about one-third of their undergraduate careers in our English Department classes; on the other hand, we had in our own right and in our own department been actively concerned for several years with the state of the teaching of our discipline, with the definition of the discipline, with the relationship between English as we taught it and the high school experiences of our students. We saw the TTT program as a laboratory useful for our purposes, too.

At the height of the program, two highly complicated processes were trying to take place (with as many disappointments as successes resulting). First, as a way of bridging gaps, there was a gradual movement towards inter-disciplinary studies in the seminars on campus. The content of the campus program had been defined originally as consisting of four areas of study--the discipline of the liberal arts, methods, the person (the individual and the group process), and the school system. At the beginning of the year, the four different staffs conducted exploratory seminars in their own specialities, with the purpose of trying to define the essential elements of their areas of concern. As the year progressed, there was a gradual movement towards inter-disciplinary seminars involving various combinations of staff and subject matter, again with the purpose of bringing a rigorous examination to the relationship between the commitments of the various disciplines.

Secondly, as a way of providing a laboratory for the doctoral students, the teacher-trainers, there was a rather elaborate, in theory any way, "double practicum" system at work. The very meaning of "double practicum" was often in dispute; but, in general, doubleness of roles was one of the tensions in the program that provided some of the richest opportunities for analysis. The student teacher phenomenon, for example, if studied thoroughly, should provide a valuable resource for dealing with the problems of relationships between students and teachers: our B.A. and M.A.T. candidates were in a double practicum as student teachers always are, but the active and cooperative simultaneous presence in the program of all components of the teacher-training system made our awareness of this much more acute. (In a way, the college freshman provides a similar key to the problem of the transition from high school to college. He is the one who most directly experiences both phenomena.) At any rate, the doctoral students (and to a lesser degree, the other students as well) were regularly participating in all planning and development sessions as time went on. The design intended that at all levels of the program, teaching and administration and program planning, they would eventually replace the original staff. From this standpoint, the goal of the staff was to work itself out of its job.

The members of the English Department, then, were involved in a number of activities: teaching seminars on campus once or twice a week, ar first in isolation, eventually in an inter-disciplinary context, virtually always with a literary or linguistic text or problem as a major focus, but also with the very important (and open) question of the value of this activity consistently in the center of our attention; spending at least one day a week at a school site, serving as a "discipline" consultant to the student teachers, establishing relationships with the permanent school staff (for example, through university credit courses in literature), participating in curriculum palnning; and, in general and in a number of ways, working at all levels of the program in efforts to work out inter-disciplinary approaches, coordinated planning, double practicums, etc. In some ways, the focus of the whole program was intended to be the days in the week when all staff and students were at the schools. At that time, presumably, would come the tension of the relationship between campus work--theoretical, discipline-oriented, contemplative--and school site work--practical, student-oriented, active.

Finally,then, the most fundamental connection between the TTT experience and the kind of plans you have for the Freshman year is, I think, fairly clear: in each case, the goal is to bridge a variety of gaps in order to find ways of making the study of the Humanities more approrpiate to the setting this university finds itself in. The gaps are terribly serious ones--between the Liberal Arts and the schools and the School of Education, the university and the community, the teachers in the public school system and in the colleges, the liberal arts as intellectual disciplines and as a means of liberating students--but I do think that the TTT experience has started to define some of the terms in ways that may be helpful to you. In this sense, the essence of the TTT experience--and, therefore, the essence I suggest for your plans--is not a series of committee reports and surveys but the energetic, committed, simultaneous presence, in each of the settings relevant to the educational system, of all the elements of that system.

Institutional Folkways

David Brumble

I remember one of my days at Braddock High School with the kind of vividness that only embarrassment can insure. The TTT program was to be in charge of an "in-service day" (what they called a "teacher's meeting" when I was a kid; anyway, the teachers get together and the kids stay home) at Braddock. Our site coordinator had arranged to have several people from (his own) department of Counselor Education come out and run a series of "encounter sessions" which were to allow the Braddock teachers and our own student teachers to talk through their differences (our student teachers were not prized by the regular faculty that year; indeed, the whole program did not warm that faculty's collective bosom).

It didn't work. The people coming from Pitt were something like an hour and a half late. The Braddock teachers were much annoyed, but they were infuriated when the Pitt people's response was, "Let's talk about why you're so upset." All of which did not bind TTT to Braddock's heart with indissoluble links. I've thought a lot about that day. It's become a kind of parable for me.

First I saw it as typical of the academy's inability to work within any framework other than its own. It seemed to me that in our work with the schools we were pre-Boasians; we were tacitly assuming that our institutional folkways were superior to (more advanced than, for Darwinian pre-Boasians) Braddock's folkways. If the Counselor Education people at Pitt were casual and if a lack of concern for punctuality was one manifestation of that informality, then Braddock's concern that 9:30 mean 9:30 was a manifestation of irrationality.

It wasn't until later that I realized that all of this applied to me as well. The folkways of the Counselor Education people were very different from English department folkways. My reaction to Counselor Education's informality was, of course, the mirror image of their response to Braddock's sense of punctuality. English department participants in the program tended to get together and talk about "them" in the same way that the TTT student teachers would get together and talk about the Braddock faculty, in much the same way that Braddock faculty talked about their "them"--us.

In a word we all had trouble distinguishing between real educational issues and differences in social structures. With all of the diversity the program had put together on paper, real interdisciplinary interchange was infrequent, especially during that first year. The Education people could have told me about supervision; Braddock teachers could have told me about their school; the community could have told me about our students...but I talked mostly with English department people because we shared assumptions and had pretty much the same table manners.

I suppose that ideally each group should make a study of the customs of the other group, but however interesting and worthwhile such studies might be, they would be time-consuming and would require a fair amount ot anthropological sophistication. In the mean time there was a lot of teacher-training to be done.

It seems to me that during the program's second year we quite unintentionally worked out a means of at least circumventing our provincialism. Our groups were broken down. The sites, the various high schools in the program, were made the points of focus. My main allegiance was to Braddock High School, my main concern was working out means of teaching Braddock's kids with the best student teachers we could get: what did those teachers need to get that job done most effectively. As soon as the program center switched from Pitt's campus (where all of us English people could be worried about what the Counselor Education folk were trying to do to--or worse, without--us) to the High School, I was forced to work more closely and much more harmoniously with the personnel from the various disciplines, with the people at the school...all of us who shared a common (and a pressing) purpose.

Something Is Always Going On

Philip Wion

As I look back on my two years' experience in TTT, I see that what means most to me is the way we focussed our attention on what we called "process." The word turned up most frequently in the phrase "group process," but we also talked a lot about the "process" of education, as distinguished from its "content" and "products"; and occasionally some of us recalled the phrase "due process," too, when we felt sombody was behaving in an especially high-handed, manipulative way.

Change was what TTT was all about--change in the schools, change in the society, change in other people, change in ourselves. The beauty of the concept of "process" is that it helps you realize that something is *always* going on, psychologically, socially, politically, whenever people get together--even when what some of them are doing is trying to maintain the *status quo*, to resist change.

Every class, every seminar, every meeting of a committee, a department, a Faculty becomes more intriguing, more challenging, the more aware I can become of what's going on, in the group, in other individuals, in me. The surface becomes more meaningful, the more I can perceive and intuit what's going on in the depths. And the more aware I am of what's happening, the more power I have to influence it, in the direction of clarity, of authenticity, or rationality and of health--my own as well as others'.

TTT was plagued--or blessed, I'd say--with meetings, meetings, meetings. Our patience often wore thin: there were too many people, from backgrounds that were too diverse, with too many axes to grind. But out of what sometimes seemed to be chaos there always emerged some form--not neat, not fixed, not a "structure" we could package or easily transport, but a living, changing, developing texture of relationships, understandings, feelings and values. We moved toward genuine pluralism and toward genuine community, and I think we learned how to work more effectively toward these in every context in which we act, in every process in which we play a part.

No Sense of Progression

James F. Knapp

My experience with TTT lasted for just one year. I joined the project in its initial planning stages, and left at the end of its first year of operation, after watching too many opportunities for innovative learning spoiled by the arbitrary chaos of a program whose true purpose was to train a manager class for education. I had participated in a fairly random variety of small groups in the on-campus component of the program, and I had travelled to a suburban high school once a week. There I encountered a team of M.A. interns under the supervision of several doctoral students, who were themselves caught up in a vague power struggle among their own supervisors in some other part of the program. They were sent out, and then called back, and when new faces arrived, they too lent our meetings an air of dark intrigue and innuendo. Four years later, their wars are a mystery to me still.

But if I felt frustration off campus, I felt despair when I began an on-campus seminar for "pre-professionals." That most anomolous of our categories was filled by people who, without formal degrees, were already working in the schools in semi-professional ways. There were mostly black, and almost uniformly fell into two groups--young men and middle-aged women. About the educational problems posed by their generation gap, I need say little, except that they existed, and they were not insurmountable. After some initial argument about what to read and what to talk about (we divided along that generation line) the class came to two clear understnadings. The first was that group decisions are not so difficult to make when you really want to get on with the group task, which for us war reading literature and talking about it. I had no experience that year which was anything like the serious engagement of that group to an honest exchange of thought and feeling. But their second understanding was less happy. Our group was to be together for only a few weeks, and there was no assurance that anything meaningful or relevant (or even anything at all) would follow. They knew what had preceeded it: a series of ad hoc activities which offered no sense of context or progression. The older women were angry and they focused their anger on just one need: a way to learn which would carry them beyond this program into the traditional college which they expected to enter eventually. The young men were angry too, though their way was to drift off, to tell me when I met them on the street, and asked.

After months, at my school site, of failing even to establish who my team would be, or how I could get course credits for one of the cooperating teachers, I had little to answer. My own sense was that out of such open promise had come only a structure of small new tyrannies, or at best, the slowness of bureaucracy. In the end, we made our experience a personal one, and simply learned together as we could. Beyond these private moments there seemed little hope that a coherent program would form, and in April I left the project.

Methodology's for High School Teachers

Marilyn D. Papousek

My one year's experience with TTT at Canevin High School opened my eyes to a number of aspects of teaching that I had previously taken for granted or had largely ignored. Both my graduate training and my experience in college teaching had been focused primarily on content: methodology was a part of one's unique classroom style; supervision was to be feared as an intrusion into the privacy of the classroom. In working with TTT, I became aware not only of the positive aspects of supervision and training in methodology, but also of the need to incorporate a greater emphasis on training and supervision in the preparation of college teachers.

As part of the preliminary planning, I was asked to work with a colleague from Secondary Education in formulating methods goals to be used for supervision and evaluation in the coming year. My first reaction was that of both ignorance of the subject and a strong antipathy towards it. However, the more I read in the area of methodology, and the more I considered evaluative instruments, the more I saw that I already was acquainted with most of these ideas, having picked them up rather haphazardly through trial and error, through reading, and through conversations with colleagues. I remember thinking that my own entry into college teaching would have been far easier had training in methods, accompanied by humane, developmental supervision, been a part of my preparation.

It was my experience at the TTT site that made my growing awareness of the value of supervision more than just an intellectual concept. As content advisor for seven MAT candidates and trainee teachers in TTT, I was immediately thrown into the position of having to provide practical advice on the presentation of literature in the classroom. It was impossible to separate content from method when student teachers needed some suggestions on what to do with Macbeth at 1:00 that afternoon.

Canevin's highly structured teacher-training program gave student teachers full responsibility for three classes after an observation period of six weeks. Ideally, trainees were to be given support and advice through weekly supervision and counseling. Unfortunately, the supervisor provided by Secondary Education neglected his responsibilities, which left the trainees alone and unsupervised in the classroom. Until he could be replaced, I was asked to take over the supervisory role. With the aid of the regular supervisory personnel at Canevin, I learned to set up pre- and post-conferences, to make evaluation a joint effort with the trainees, and to provide the kind of information that would be of value to the student teachers. The more I became involved in supervision, the more I was able to identify areas for observation, and to emphasize the developmental rather than the judgmental aspects of evaluation.

When I was asked to become part of the program for training graduate assistants in college teaching in my department the following year, I tried to incorporate as much as possible of what I had gained ffom my experience in TTT into the Seminar in Teaching Drama and the supervision on teaching assistants in the Introduction to Dramatic Literature course. These aspects included an emphasis on methodology, a concern with group process, a system of both faculty and peer evaluation, and a focus on consistent self-evaluation by teaching assistants. My main concern was to try to apply what I had learned in TTT to the training of college teachers, to see if a greater emphasis on methodology and supervision would result in any significant increase in the teaching ability of graduate teaching assistants. Staff seminars were divided into two parts for each session: the first was devoted to content (literary analysis, critical theories, etc.); the second was devoted to methods for conveying this material to students. In addition to observing occasional classes and providing advice and support to teaching assistants, I spent at least a week in the classroom with each of them, either team-teaching, demonstration teaching, or observing a series of classes. Furthermore, the emphasis on self-evaluation and developmental supervision which I learned during my encounter with TTT was made the basis for the final evaluation of their year's work.

This trial program was met with some hostility from teaching assistants who felt, as I had once felt, that "methodology was for high school teachers," and also from those who were committed to non-structured classes. However, all of the members of the drama staff admitted by the end of the year that they had profited from the experience; some of them had improved dramatically in their ability to lead a class. They all showed a growth in their self-awareness as teachers, an increased ability to plan varied classroom activities, and an enlarged understanding of the value of setting goals for each class and for the course as a whole. Perhaps the most significant change was the increased self-confidence which all of them exhibited by the end of the year.

It is obvious that training in methodology and classroom supervision should play a part in the training of college teachers, although the degree of importance is still open to question. My experiences with TTT gave me a number of possibilities to consider for training college teachers.

TTT: The Aftermath

Michael S. Helfand

When I joined the TTT program a year after it began there was great hope that the soft money from the federal government would harden and that this complex and new teacher training program would continue, in some form or another. Unfortunately, the Great Society was not to be. The small community in the English Department and the School of Education will be left under the old dispensation--and the old institutional division--to implement the valuable innovations of TTT insofar as they can. Since I am now (1974) acting as liaison between the English Department and the School of Education, I will describe the change in the relations of these two entitites caused, to a great extent, by our joint commitment to the program.

Before TTT one person in English handled all advising for English Education majors. She taught courses in historical linguistics and adolescent literature. Her job was backbreaking and she performed essentially in isolation since the service was considered _infra dig_ by the rest of the English faculty. Courses in both English and Secondary Education were planned independently and there was minimal communication on both sides.

The demands for better teaching and more relevance in the late '60's renewed the interest of some department members in pedagogy and social service. The year I arrived at Pitt, totally ignorant of this national program, a sizeable minority enthusiastically committed themselves to it. My own experience with TTT may demonstrate the changes achieved with someone who was educated as a traditional research-oriented Ph.D.

For a year I listened to my colleagues discuss pedagogy, the complex social and psychodynamics of classrooms and meetings, and the politics involved in the transmission of information. I was fascinated because it was new and interesting and I was having trouble in the classroom myself. I volunteered and learned through reading, team teaching, and through experiences in high school and junior high classrooms. In some ways the most fascinating and rewarding experience was dealing with the problems of educating mentally and physically handicapped children. In all these places I learned the social realities surrounding the information. I learned (I should say re-learned) what some of the interests of adolescents are, what they like to read about. I learned the particular backgrounds of Western Pennsylvania high school students. I learned something about the real problems and needs of beginning instructors and something about the frustrations and boredom of more established teachers. I became a better teacher because of a growing awareness of process and a new and precise knowledge of the concrete circumstances which inform teaching situations in this area. For me, the best kind of learning in any program occurs when different disciplines with equal power honestly share their ideas, ideals, structures and solutions with each other and with their students. This occurred in TTT.

My colleagues and I also discovered that our relative ignorance of group processes and social structures left us initially rather powerless to inform the program: we found that we had been "placed," quite reasonable, by our more knowledgable colleagues in education, as "content" people. It took some time for the content folks to regain a real equality in the structuring of the program--but it was a lesson well learned. We now know on the pulses the fate of a "content" education in the world of institututions and classrooms outside the English Department.

The effect of the collaboration on our department has been clear. While some members remain hostile or indifferent a large majority has come to accept the discussion of pedagogy and process as something educationally significant. We have changed both graduate degree programs to require students to teach and to take, simultaneously, a seminar on teaching which will emphasize both the discussion of practical problems and an introduction to theories of teaching, classroom evaluation and mutual visitation. There are college-wide experiments in alternative forms of learning which are staffed by TTT personnel from English. We are presently working with members of the School of Education to organize a special program for junior college teaching which could only be created through shared expertise.

The interaction between English and Education is now active and fruitful. Individuals in our department are undertaking the service courses and are teaching them with the needs of student teachers in mind. My own class in adolescent literature, planned jointly with Education school personnel, has sections on censorship, reading inventories, levels and forms of reader response, junior novels and the history of popular culture and sub-literature. Team teaching between departments continues. Linguistics is taught with a similar teaching orientation. The response of students has been enthusiastic. Our department has committed itself to continue this new partnership. Faculty will be freed to serve as on-site advisors for practice teachers and to participate in the day to day functioning of English Education classes. There is talk of graduate assistants doing similar work under supervision to satisfy some of their teaching preparation requirements.

We have, in fact, grown little off-shoots of TTT, even without the Great Society. We have done it despite a new wave of academic conservatism. Whether this growth will last is, of course, problematic. It depends to a great extent on the real committment of this university to the improvement of public education on all levels.

Training Me

Christopher Rawson

Coming from the world of the "pure disciplines" as we did, TTT was a remarkable adventure. It was especially so for me, since I spent the full three years in the program and functioned in a mind-bending variety of roles. And since my first year of TTT was only my third year as a full-time college English teacher, I know that the TTT experience was central to my development as a professional educator.

But before describing a few of the many positive lessons TTT taught me, I must address myself to the academic reward system. What I want to say is not in the least disinterested, since I have just (Spring, 1974) been denied tenure and promotion at the University of Pittsburgh, specifically because I have devoted myself here to programs like TTT and not to traditional scholarship and publication. But my case is not unique; the proper criteria for promotion are the subject of great controversy throughout Academe, and rightly so. As the cliche has it, if you would understand a system, look to what it chooses to reward.

Very simply, there is still a radical discontinuity between the abstract concept and the active reality of the functions of the university and (particularly) of the liberal arts college. A program like TTT is itself a perfect example of what that function can be: all the accumulated resources and values of the disciplines being brought, in the energetic participation of faculty trained traditionally in those disciplines, into active relationship with professionals from the "real" world (in this case, that of the secondary schools). The result is both service--to students at all levels, to secondary school staff, to communities, and to college faculties themselves--and research--as the values and methods and knowledge of the liberal arts receive a rigorous testing and redefinition.

But back home in the Faculty of Arts and Sciences, what is primarily valued is "pure" research, within the traditional disciplines: and this research can be easily measured only in published form. Even inter-disciplinary publication is suspect; consider, then, the disapproval of time-consuming service and research that does not result in publication.

A program like TTT depends absolutely on the intense committment and caring of all participants. But the established powers at major universities are now calling this commitment peripheral. Of course the universities will continue to encourage innovative programs about which they can boast to state legislatures and federal agencies, but the staff in such programs is being exploited: it can be regularly replaced out of the large pool of unemployed Ph.D.'s. So who will risk the dedication and willingness to experiment that TTT must have to be successful, when the rewards then go to those who stay home to do "their own" work, rather than the work of society?

* * * * *

Very briefly, the lessons I learned from three years of TTT fall into three categories relative to (1) the reality fo being a teacher in a public secondary school, (2) the nature of the discipline of "English", and (3) the value of "process" and liberating structures.

The grimmest lesson concerned the high schools. I discovered, in the rural, parochial, and correctional schools I worked in during the three years, that teachers at that level are not independent professionals, but bureaucrats. Even in the most progressive situations, the smooth functioning of the system is valued beyond all else, and in that atmosphere even very committed and competent teachers lose their sense of themselves as autonomous and stimulating professionals, while less capable teachers quite contentedly dwindle into paper-pushers, processing students the way the Post Office processes letters.

One experience particularly brought this home to me. For two years I led a graduate seminar, given for credit on site at the rural high school. We met informally after school once a week for fourteen (14) weeks, and since TTT paid the tuition (and I contributed my time), about a dozen teachers enrolled, including the principal and the teachers of German, English, art, etc. Our ostensible subject was the contemporary novel, but I chose (or had the group help choose) recent books, fiction and non-fiction, that would provide a "good read" and spark interesting discussions.

Discussion was slow. I thought it was because of the initial suspicion of me, the outsider. But that wore off, eventually. The main problem was that those teachers had little experience in talking to each other about issues more complex or abstract than selling basketball tickets, faculty politics, or local gossip. The principal assured me that the seminar was a great success because for fourteen weeks a number of his teachers were simultaneously reading the same book each week, and this occasioned a whole new kind of conversation in the hallways, over lunch, and in the female teacher's lounge. (The male lounge remained dominated by sex and sports, but then no male teachers were taking the course.)

In other words, the seminar was a functional success as far as the school was concerned. (The work done was mediocre in comparison to that expected in such graduate courses on the Pitt campus, but I recognize that that is an artificial standard.) My main lesson, though, was to see how good people of average skills and concern for students, in a school led by a humane and intelligent principal, had been deadened by the routine of their jobs so that interest or curiosity about the larger issues of our day (let alone about art or abstract ideas) never, without a (rare) outside stimulus, bubbled forth into conversation. The teachers hardly knew each other, although they knew their places in the system.

My second category of lessons, about the relevance of the various sub-disciplines of "English" to "real" life, is far too large to handle here. I know I am now a more aware and valuable resource to my undergraduate and graduate students of English than I was before, but to describe just how would be to write the autobiography of four years.

Similarly, it is difficult to capture in brief my new understanding of the importance of constant attention to process as a structural principle itself in any educational system. Others in this report have talked of their heightened awareness of process itself; I am fascinated by the administrative techniques that force a system continually to be aware of its own processes.

Our TTT project involved some administrative geniuses--or madmen, depending on your perspective. They were certainly manipulative, but the question is whether the chaos they purposely created from time to time was constructive or sterile. Do we want selfconscious educational "managers"? I think we do.

Put baldly, the basic TTT administrative technique was to frustrate expectations, especially early in the year. "Liberated" from the usual requirements of a system, students (and faculty!) at all levels had to build their own; and when that was upset, they had to build anew. Of course this is not true chaos, only a different sort of system. But the point is that the system itself was continually in question: the disruption performed the function that the satirist performs in literature, to deny us the easy explanations, the comfortable patterns.

The doctoral students and faculty who survived, the "managers", learned a great deal about the practical intricacies of a (political) process. For some, the frustration was too great; it is a demanding style, and in it loss is inevitable. Some made compromises and slipped through, marking time until they returned to the real, more clearly structured world. (I was never absolutely sure that the gains outweighed the losses, or that I wasn't too quick to make the easy compromise, to help create administrative peace, preferring comfort to growth.)

At its best this system jars everyone into action. Students and faculty at all levels must be forced to take a hand in their own lives. Decentralization is crucial: by the third year we were much better at involving even undergraduates in designing and running their own programs. But decentralization had always to be tempered with fluidity to prevent the institution of new (though smaller) tyrannies. Of course it is hard to build anew almost from scratch every year, but we who were caretakers of the system had to be willing to do that to encourage real involvement from each new student.

In some ways I was glad to see TTT end. This continual rebuilding is wearing, and there is no substitute for the fresh excitement and energy we poured into the first two years. The absolute principle in education is never to do anything without continually examining why and how it is being done. The necessary elements are energy, caring, time, and lots of meetings. But even more baldly, the invaluable administrative imperative I learned from TTT boils down to one word: Change!

PITTSBURGH TTT PROJECT

TTT DOCTORAL PROGRAM

C. CONNORS (Ed.)

SECTION FOUR

Program Case Reports

TTT DOCTORAL PROGRAM

Coordinator

Canice Connors

University Representatives

Sam Francis - Secondary Education

Robert Marshal - English (Humanities)

Joan Nelson - Reading and Language Arts

Mark Peterson - Counselor Education

Phil Wion - English (Humanities)

TTT Doctoral Program

I. Program Organization

A. Recruitment and Admission.

The TTT emphasis on program development was built into the recruitment of doctoral fellows by recruiting them from five University school/city complexes. The five were: Cleveland Schools/Cleveland State University, Berkeley Schools/University of California at Berkeley, Houston Schools/Texas Southern University, Albuquerque Schools/University of New Mexico, a consortium of a suburban school district, the Greece Central Schools and the Rochester Schools/Brockport State University of New York. In each instance, fellows who were recruited by school districts, the Universities and the communities in these five areas were selected by Pitt and teacher trainers from the area--usually the TTT director in the area. In 1970-71, a number of short-comings and inadequacies in this recruitment process became evident and recruitment was thereafter directed away from Master's candidates. Recruitment was exclusively of doctoral and post-doctoral fellows who had a high probability, indicated by past experience and recommendations, of returning to playing significant roles in training teacher trainers and developing teacher training programs upon completion of the residency year at Pitt.

Another development which began as the TTT project started to gain visibility in the 69-70 school year was that doctoral candidates from various departments within the School of Education and various local school districts applied to do a year of doctoral residence in TTT using their own funds for support. In 1970-71, for example, five of these were enrolled as full time students in TTT.

The admission procedure for the Pitt TTT program was handled by the staff of the Counselor Education Department, where all credentials required by the University and the Office of Education were processed. Decisions on admissions were made by the Doctoral Program and Degree Committee after a review of credentials and personal interview. Recommendation for full graduate study was sent to and processed by the Office of Graduate Study.

B. Student Advisement.

After the first six months in the doctoral level program, students were given an opportunity to choose their own advisors. The Core Faculty discussed these choices, and in further conversations with the students, mutually agreed-upon advisors for each student were assigned. No Core Faculty member was assigned more than five student advisees. Advisors maintained very close informal contact, at least weekly, with their advisees throughout their participation in the program. More formal advisement was regularly available through the evaluative and "staffing" process (a model of professional communication, where feedback and program modification procedures are explored).

C. Major Instructional Groups and Faculty Assignment.

Major instructional groups at the doctoral level were: supervision, study of person, research, group process, philosophic and social foundations, discipline area, and field experience. Study assignment to these course areas was as follows:

Core experiences were provided at the outset of the program for orientation and development of competencies required for field-site participation and research activity. Core experiences included supervision pre-practicum, group grocess, group management seminar, research and design seminar, community organization seminar. Faculty were ass assigned either individually or in teams to these initial seminars on the basis of their own competencies.

Upon completion of this initial course work (first eight weeks of the program) students were assigned to programs of their choice and through these programs to a site assignment. Each student had the responsibility of negotiating with his competency committee an individual program to satisfy his/her own objectives for personal and professional growth as a teacher trainer, and the program objectives for the examination of constructs to improve the qualities and processes of teacher training.

Each individualized program was competency based. A competency contract included a rationale for the objectives, a statement of the competency desired, a description of the learning environment and activity, and the criteria for evaluation. Competency in four areas was required for a balanced program.

1. The Field-Site and In-Service Area: it was a program expectation that each student would:

a. establish and maintain self personally and politically with the variety of people encountered in field situations

b. engage in a clinical experience in a teacher training activity in the field

c. takesome significant part in managing, designing, supporting, evaluating an aspect of institutional or program development in the field.

2. Pre-service Area: each candidate was expected to work out a significant double practicum experience in an education area such as learning, child development, reading and language arts, counseling, group work, etc,. and during the year, work successfully in that area as a trainer in one of the TTT Pre-service training programs.

3. Research: each student had to develop the skills necessary to be an intelligent consumer of research materials and engage in learning experiences essential for completing his/her doctoral thesis project.

4. Specialized Studies Related to Teacher Training: the student was expected to participate in a learning activity, available through the program, which was appropriate for the candidate's personal and professional growth as a teacher trainer.

Faculty assignment to these learning experiences were negotiated as students contracted with various faculty members for learning to meet individual objectives. Each student's set of competency contracts then represented his/her individual program of studies.

D. Grades, Evaluation, and Advancement through the Program.

The doctoral program avoided the employment of course titles, credits and grading in training candidates. Evaluation was handled throughout the program through a three-part process:

1. Diagnostic evaluation was managed by each candidate and members of the Doctoral Program and Degree Committee during the initial phase of the program. The intent of this process was to establish the skills already possessed by each student and his/her training needs. This information and the results of the General Education Examination was used by the student and his/her advisor in designing the individualized doctoral program.

2. Progress evaluation at approximately eight-week intervals, each advisor collated feedback from each segment of the training program to allow the student an estimate of his rate of development.

3. Evaluation of degree: each student, working with his/her competency committee, negotiated with TTT staff (in the B.A. - M.A.T. training programs, at sites, and on campus) learning contracts which reflected the training goals and interdisciplinary character of the program. The fulfillment of these contracts constituted completion of doctoral course work.

Upon fulfillment of the plan-of-study and recommendation of the competency committee, the Doctoral Program and Degree Committee processed the appropriate forms through the Office of Graduate Study. At any time after admission to doctoral study, a candidate might begin working on an overview (contract for doctoral dissertation or project) with members of his/her overview committee. Acceptance of the overview by this committee constituted a one-year agreement to serve on the board for the oral examination on the complete project or dissertation. The final phase of the program, then, covered the time necessary for writing and publishing the project approved by the overview committee and the year spent in an internship or externship directly related to teacher training. It concluded with the awarding of the doctoral degree.

E. New or Significant Faculty Roles and Relationships.

The most significant faculty roles and relationships which developed as a result of the TTT program were cross-departmental curricula development sessions. The inter-departmental, interdisciplinary nature of the program also provided for systemic linkages expressed in inter-departmental teaching teams. The doctoral level faculty, for a time, also took part in weekly group process sessions, which were developmentally beneficial to all participants.

II. Core Faculty

A. Composition and Organization, Management Model and Roles.

The composition of the Core Faculty of the TTT program was made up of representatives of the following departments: Counselor Education, Secondary Education Department, English Department, History Department, Reading and Language Arts Department, Mathematics Department and the Science Department. Organization of the Core Faculty into a management group to achieve the objectives of the doctoral program and insure constant interaction among program administrators, faculty, and students was achieved through a three-level, inter-connected model.

1. Level I: The Doctoral Program and Degree Committee was composed of representatives of the Counselor Education, Reading and Language Arts, Secondary Education and English Departments as well as Administration representatives. This committee was responsible for the on-going maintenance of the doctoral program. This responsibility included day-to-day processing of necessary forms required by the University to insure up-to-date maintenance of student records. In addition, each member had the responsibility of advising individual doctoral fellows through frequent personal contact. The committee met weekly to insure constant communication among members concerning the on-going program processes. In addition, members arranged weekly meetings with individual student advisees.

2. Level II: Doctoral students and Program and Degree Committee made up the second level group responsible for determining over-all policy for the doctoral program. Such policy was concerned primarily with program design, the evaluation of students' needs, and determining programs to meet those needs. Meetings at this level were held on an _ad hoc_ basis to reflect on current programs, to examine the implications of proposed programs, and to consider student input in designing programs which would meet the needs of the individual student. Students also reviewed the nature of their own programs and the variety of activities taking place in the sites from the perspective of social systems theory with the Program and Degree Committee.

3. Level III: The third level of organization of the Core Faculty was made up of all TTT faculty from all departments involved in the

program and representatives and coordinators of all sites. It was the responsibility of this total group of faculty and site coordinators to determine policy for the total training program and its general management. It was also the responsibility of this group to examine the programs designed by the students and the Doctoral Program and Degree Committee, and to revise them as necessary to adjust for available resources, while maintaining the integrety of the student-oriented, student-planned programs. This group also amintained personal contact with doctoral students in the program through their individual advisory relationships with them.

General group meetings were held on an _ad hoc_ basis to revie and examine proposed programs. This interdisciplinary review insured that students would benefit from all faculty and departmental resources available through the program. In addition, idividual involvement with students was accomplished through faculty and site coordinators' membership on students' competency committees. In this advisory capacity, faculty and site representatives remained in continuing conversion during weekly meetings to insure that individualized programs did constitute a program gestalt.

It was through the Competency Committee that the field site and on-campus activity was combined. Each student's Competency Committee was composed of an advisor from the Doctoral Program and Degree Committee, a faculty member from the program to which the student was assigned (chosen in consultation with the site coordinator). As members of these committees, faculty, site representatives, and Doctoral Program and Degree Committee members met with students to establish and approve programs with proper interdisciplinary balance, and periodically to monitor progress in fulfilling the established program of studies.

The University of Pittsburgh TTT program attempted to involve all components in a vital "arrangement" wich would avoid the institutionalization of TTT as a program in any one component (disciplines, school, communities, or School of Education). TTT at Pitt thus created its own alternative which was the gradual formation of an "adhocracy" which provided a loosely bounded structure to serve as a temporary and fluid system that could become a vehicle for seeking time and place from schools, communities, schools of education and disciplines. This structure created a situation where all involved could be free from the primary restraints of their own "bureaucracy" and where each could move from their primary identification into a place where, together, all Core Faculty became commonly identified with the development of train training programs and the cooperative training of teacher trainers.

B. Decision-Making.

Decision-making at the Committee level was achieved through joint negotiation and consensus around issues concerning structures and processes. Over the years of TTT at the University of Pittsburgh it became evident that it was rather futile, if not impossible, to resolve issues within TTT. Resolution of issues became not so much the goal as expansion and broad involvement of as great a range as were willing to come in and make themselves heard and felt within TTT. The attempt was to join issues, not around one issue or one component, excluding another, but rather toward developing situations large enough to to include all issues--not to seek agreement but rather to agree or disagree. On one level (at meetings for example) issues often got philosophical and heavy. The goal became not to reach agreement, but rather to examine issues from all sides and then to move away from this level, out onto the level where real children with real problems and real teachers need programs and trainers to help them solve those problems. It was out there that the protagonists at meetings tended to become more cooperative than competitive. Here, the inputs from the various sources, that at a philosophical, didactic argument level, might have been competitive and almost irresolvable, tended to blend. Where there was disagreement among people at a meeting, committee or staffing, these same people in the real conditions of TTT sites tended to work agreeably together toward the same ends.

C. Student's Role.

Finally, in addition to all of the input from Liberal Arts Faculty, School of Education Faculty, School District Personnel and Community Representatives, the student's place in the process was critical. In a project designed the way the Pitt TTT project was designed, it was the student who focused the challenges and integrated all aspects of the project at each level, because they came neither from the communities, the schools, the School of Education or the disciplines, and because they were at the same time affected by all. Thus, students served to force a level of integration, a level of challenge that was more whole and more real than that found in any one of the TTT components separately.

III. Curriculum

All doctoral condidates were recruited on the assumption that is would take approximately two years to complete the doctorate. The first year was a year in residence in the Pitt TTT training situation. The second year was an externship year working in a team in one of the affiliated TTT projects. The second year candidate implements, work out, evaluates and writes up a project in teacher training which becomes the thesis. With intermittent help from Pitt, second year candidates worked with University School of Education and Disciplines, school districts and school communities in his/her own city in such a way that what was learned at Pitt during the first year was applied into his/her own situation in training teacher trainers and in development of teacher training programs. The content, structure and organization of first year curriculum which is the basis for the second year intern/externship is described next.

The first year residence was divided into four parts. As has been explained earlier (see Major Instructional Groups and Faculty Assignment), the initial experiences of the residency year provides a full-time, on-campus orientation and development of competency in supervision, Study of person, Research, Group process, and Community Organization areas for eight weeks. On the basis of evaluation of this work, each candidate developed his/her own individualized doctoral program. Requirements for this program in four areas (Field Site and In-Service, Pre-Service, Research, and Specialized studies Related to Teacher Training) have already been described.

A. Objectives.

The general objectives of the TTT Doctoral Program which would assist student achievement of requirements were:

1. to provide doctoral students multiple and varied opportunities to examine the substantive issues concerning teacher training.

2. to facilitate an experience-based understanding of the major developmental processes involved in training teachers.

3. to develop skills in staff and program development.

4. to provide learning opportunities through which each student might develop a capacity for intelligently utilizing appropriate research literature and data; beyond this minimal level required of all doctoral students, each candidate had to develop the research and design skills necessary to the completion of his/her dissertation or doctoral project.

5. to provide opportunity for the study of recently developed theories and models of supervision, curriculum development, and administration, and opportunities for applying these learning experiences under faculty guidance within pre-service and in-service training programs.

6. to provide seminars in specialized studies related to teacher training, such as the study of social systems and techniques for changing them, group theory and practice, philosophy, and any other studies appropriate to the goals of TTT.

B. Schedules.

The schedules or "program conditions" through which the doctoral students moved were:

1. Each candidate spent approximately three days each week work working with the School of Education and Discipline Faculty within one of five B.A.-M.A.T. training programs: English (two), Math, Science, or Social Studies. Participation in such programs allowed a sharpening of skills already possessed and the development of new training competencies.

2. Each candidate, as part of nis shared responsibility for the B.A.-M.A.T. training program, had the opportunity to maintain and develop him/herself in a TTT training site located in an urban or surburban school or an institutionalized children's program.

3. Two days each week, doctoral candidates participated on campus in seminars designed with them for their professional growth. Part of this time was made available for research work.

4. The entire program was on a full residency basis without the formal structure of credits or courses, to maximize flexibility and to allow students full access to learning situations which evolved during the ongoing processes in the total TTT design.

It might be emphasized that throughout the doctoral program, candidates worked in a very low faculty-student ratio. At the doctoral level, a great part of the candidates' work was one-to-one with faculty or was spent working with small faculty teams. Also evident in the above description is the fact that the doctoral program, organized entirely on an individual basis with no courses or credits in the traditional fashion, had a heavy emphasis on field work. One-fourth of the program was organized completely around field competencies.

C. In-Service.

In-service activities involving doctoral candidates emerged in two levels. Within individual site assignments during the course of the residency year, both Core Faculty and doctoral candidates participated in planning and teaching in-service seminars for resident faculties of site schools. Topics of seminars, attendance and faculty/doctoral students' teaching and planning roles varied with the needs and interests of the site's resident faculty.

At the University level, "in-service" may be too structured a word to describe "how" the effects of traditional in-service programs were achieved without formalization. For example, the very low faculty/student ratio allowed for an intense identification of the doctoral candidate as a trainer of teacher trainer both in the field and on campus. This arrangement also facilitated changing of roles and developing of new styles by faculty in the disciplines and the School of Education. While doctoral candidates developed competencies and worked up elements which they would implement, they were doing this jointly with faculty members who at the same time had to change their styles, develop their techniques, all of which helped faculty to develop greater support of competencies. Faculty almost constantly were going through redesign, redevelopment, and re-education processes. In this sense, it might be said that TTT was really striving to retrain the faculty from the disciplines and the School of Education through their involvement in the TTT processes.

IV. Sites for the Program

A. Selection of Sites and Individual Site Needs.

Sites are very critical to the Pitt project at all levels, not only the doctoral level. The TTT program at Pitt has used as sites schools and communities which run the entire gamut of types of situations for which trainers of teacher trainers and teachers are being prepared, in order to give the widest possible choice of experiences to all participants. The goal here was to develop a range of sites so that anybody at the University of Pittsburgh wanting to enter education at any level would be able to specify the kind of school-community-student situation for which he/she wished to prepare and then have the opportunity to spend the training in residence with discipline and School of Education faculty in that particular kind of school-community-student situation. Some examples of these types of situations made available as sites for the TTT program in Pittsburgh were:

1. an inner-city school,
2. a school with disadvantaged population just outside the city,
3. a rural rather distant ex-urban kind of school-community,
4. a suburban school-community,
5. a youth development center for dependent, neglected and delinquent children who are institutionalized,
6. a crippled children's home which is a multi-purpose institution which handles dependent, neglected and delinquent crippled and all types of special education problems and cases, and
7. a parochial school representing a mix of city and suburban students.

The specific instructional and training needs of these sites were as diverse as their descriptions. The focus of site activity was on development of curriculum, method, and input from the disciplines, around teachers, around education, around schools and communities. Site programs, therefore, were always primarily developed in terms of the needs of the particular site students and community. This precipitated many kinds of curriculum revisions. Eventually, all curriculum requirements in their traditional form were suspended and the individual and joint judgments of professional input components from the disciplines and the School of Education were trusted to seek out new methods, new processes, new materials to create more effective teacher training programs.

B. Supervision.

Supervision of site activities tended to vary somewhat by sites. In general, however, supervision was implemented as follows:

1. Across levels, i.e., teachers were supervised by teacher trainers of teachers who were in turn supervised by trainers of teacher trainers (University faculty).

2. Sequentially; i.e., supervision at all levels consisted of planning activities, direct observation of teaching and follow-up feedback and evaluation.

In some cases at the doctoral level, team supervision models were used. In other cases, peer supervision models were developed. One group of doctoral students, for example, proposed to the Core Faculty a Peer Training Model for Competency Development which contained in its format an opportunity for participants to repeat demonstrations at sites under peer supervision.

C. Primary Factors of Success of Site Training.

Perhaps the most significant factor of the success of site training of doctoral students was that all five components functioned in the sites and that there was vertical articulation in each site, i.e., that trainers of teacher trainers, teacher trainers, teachers, pre-service teachers and preprofessionals all were trained in the same situation, around the same space, in the same site-school-community situations. Also of great significance was the fact that this kind of training and experience went on for a full-year's time. It was possible, therefore, for doctoral fellows to research and visit sites in the summer prior to full-year residency, and then move into the site of their choice with sufficient time to get to know the community and school, the students and their needs, the trainees at other levels, and a wide variety of expertise and methods in core faculty and resident school faculty as well during their year of resident training. The presence of all of the vertical components in the school-community site together allowed for overlaps in training from one level to another and competencies that could be shared and used cooperatively across levels. Training teams and double practicums (an integral part of the doctoral level training program in particular) were two vehicles that capitalized on this factor. These people were combined into action teams mainly around the lab and practicums so the TTT's worked with the TT's from the various sites, the TT's worked with the teachers in the sites, and the teachers worked with the students. The immediacy of contact of people at each level working with people at all other levels developed much greater cooperation and support for all levels. This cooperation and mobility of people across levels helped to reduce the distance and "unknown" factors that create alienation and decrease motivation.

V. Doctoral Students

A. Role of Doctoral Students.

The first year of the doctoral level program is a year of residency during which the student holds the role of both student, being trained to train teachers, and teacher, training teachers while being trained to do so. Doctoral students were engaged in supervision of teachers and in peer supervision and therein held a supervisor's role. Doctoral students were involved in evaluative staffing of teacher trainers and as such often held the role of evaluator/advisor as a member of a staffing team.

B. Models for Double Practicum in the Doctoral Program.

At the doctoral level, double practicum situations in pre-service training, in in-service training, and in field situations were identified for the implementation and practice of competencies. Double practicum designs took about five forms:

1. In the early phases doctoral students worked with teams from the disciplines, School of Education, the field and various school groups in planning, designing, implementing, evaluating and re-re-implementing various elements in the field or pre-service training programs. Thus the first double practicum was assignment to a team with comprehensive responsibility for an area of competency or a

particular element.

2. Other practicums had students assigned, under supervision, to carry out an element aimed at achieving a certain competency in the field of pre-service programs.

3. Another double-practicum had the student team with a community person, school persons, School of Education of Discipline faculty member in carrying out a particular element aimed at developing a particular competency.

4. A doubel practicum was arranged in which the doctoral candidate worked on a team for program design or development, or institutional design or development.

5. The student might also work in a pre-practicum situation, reading, role-playing, working through protocol materials, working on mini or micro units and in other ways gradually developing competency sufficient to take responsibility in one of the other double practicum situations in which he/she would get clinical experience as a trainer.

In all of these areas the personal and clinical experiences have built in some support base. These took many forms: planning sessions, analytic evaluations, feedback sessions, sessions, sessions designed to build up research and theoretical backgrounds, or seminars designed to support competencies in various areas.

C. Some Teaming Arrangements Using Doctoral Students and Faculty.

The inclusion of doctoral students with faculty on teams was often evidenced in the program in teaching situations for teacher trainers. Discipline courses and siminars were quite frequently planned, taught and evaluated by teams of doctoral students and faculty. In-service seminars offered at site schools were also planned and implemented quite often using doctoral student/faculty teams. Doctoral students also served on teams which included faculty as well as site representatives (administrators, teachers, community people, etc.) dealing with curriculum revision, program design and evaluation of total site programs. Doctoral students also worked as part of teams with faculty in evaluative staffings of teacher trainees' site experiences. All of these activities aided the total cooperative process so necessary between the group of doctoral students and the faculty with whom they were so very closely working throughout their residency year especially.

VI. "Spin-Off" Outcomes

The unforeseen, yet nonetheless real, outcomes of the University of Pittsburgh's TTT program were multiple, both within the University and outside of it. At the University, many of the change strategies which evolved through interactions between doctoral students and core faculty in areas of curriculum design, teaching teams and methodologies, and evaluation processes, eventually were used to the benefit of other department programs--primarily the English Department. Also, the interdisciplinary teaching teams which developed in the TTT program have continued to exist in varying combinations.

One site outcome of the program was that one of the sites used in the TTT program has continued to offer its resources as a training site for teachers--not only from the University of Pittsburgh, but from five other local colleges and universities also. This type of inter-university collaboration was fostered partly as a result of the earlier cooperation among staff members of the University of Pittsburgh

TTT program and a P.P.S. program operating at the same site school out of Duquesne University and Carlow College.

A particular outcome of the Pitt TTT program that resulted directly from the doctoral studnets' involvement occurred in Greece, New York. Doctoral fellows form the Greece Central Schools, who were recruited into the program through Brockport State University of New York, have returned to Greece for their externship year (and full employment as well in some cases) and these students have replicated in the Greece Central School District the total teacher training system developed in the University TTT program. All in-service and training components of the Greece system, including evaluative staffing, have resulted as a direct outcome of the doctoral students' involvement in the University of Pittsburgh TTT program.

PITTSBURGH TTT PROJECT

ENGLISH PROGRAM

ENGLISH PROGRAM

Coordinators

Jeremiah Horgan (PY) 1970-71

Sean Hughes (MAT) 1970-71

Wilma Smith (I) 1971-72

Thomas Meade (II) 1971-72

Wilma Smith 1972-73

Discipline Representatives

Christopher Rawson (1970-73)

Philip Wion (1970-71)

Dave Brumble (1971-72)

Mike Helfand (1972-73)

School of Education

Ernest Dorow (1970-71)

Peter Soderbergh (1970-71)

Dave Karl (1971-72)

Steve Koziol (1971-73)

Michael Morris (1972-73)

Site District Representatives

William Faith (Pittsburgh, 1970-71)

Robert Walsh (Canevin, 1970-71)

Richard Napolitian (Broddock, 1971-72)

Community Representatives

Ann Harty (Canevin, 1971-72)

Barbara Blanon (Braddock, 1971-72)

Other Faculty

Tom Anderson
(Couns. Ed., 1970-71)

Wade Baird
(Couns. Ed., 1970-71)

David Botwin
(Couns. Ed., 1970-71)

David Brumble
(Eng., 1970-71)

Nancy Donnelly
(Eng., 1970-73)

Ogle Duff
(Eng., 1972-73)

Rose Feldman
(Eng., 1971-73)

Don Giarrusso
(Couns. Ed., 1970-71)

Beverly Harden
(Couns. Ed., 1970-71)

Michael Helfand
(Eng., 1971-73)

Jeremiah Horgan
(Couns. Ed., 1970-72)

Andrew Hughey
(Couns. Ed., 1970-71)

John Mosely
(Couns. Ed., 1970-71)

Marilyn Papusek
(Eng., 1972-73)

Mark Peterson
(Couns. Ed., 1970-71)

William Pruskar
(Eng., 1972-73)

Sue Schiller
(Reading & Language Arts)
(1971-73)

Judith Scott
(Couns. Ed., 1970-71)

Rae Siporin
(Eng., 1970-72)

Marilyn Sternglass
(Eng., 1972-73)

Rose Trattner
(Eng., 1970-71)

Richard Walker
(Eng., 1972-73)

Edward Weir
(Sec. Ed., 1970-71)

Jean Wensanel
(Reading & Language Arts)
(1970-73)

Phil Wion
(Eng., 1971-72)

Sites

Penn-Trafford (1970-72)

Oakdale (1970-73)

Canevin (1970-73)

Bellevue (1970-72)

Braddock (1970-72)

Home for Crippled Children (1971-73)

Doctoral Fellows

James Currie (1971-72)

Richard Harden (1971-72)

Jesse Lomeli (1972-73)

Margaret Mahler (1972-73)

Jimme Taff (1972-73)

Barbara Daykon (1972-73)

Luanne Kubish (1972-73)

English Program

The English Program was the first MAT/PY program within the TTT project, operating for three years (1970-73). As such it was the largest, involved the most faculty and trained a significant number of teachers. In many respects, it was the prototype for the other programs conducted during 1971-73. The program enjoyed the involvement of a significant number of discipline faculty. Their report, written as a separate document, is included elsewhere. The following is a synthesis of the three year training program.

I. Program Organization

During 1970-71 the program was organized by levels, i.e., MAT program and a PY program. During the year common classes, individual differences and the competency approach to curricula and assessment blurred these distinctions. Hence, MAT and PY programs were combined for future years.

During 1971-72 the project conducted two English Programs with MAT and PY students combined. Each had a Core Faculty and support staff and operated as autonomous programs. Organizationally, they were designated as English I and English II.

The final year, 1972-73, one English program was conducted.

A. Recruitment and Admission.

MAT applicants were recruited from field sites, the pool of regular University of Pittsburgh MAT applicants and from the English Department graduates. PY applicants were selected from the pool of English Education and English Majors at Pitt.

Selection was made by the core faculty after review of credentials and group interviews. MAT applicants were also screened by participating field site using procedures developed by the separate sites. PY's were also, screened by the site.

Final selection required these two independent decisions; program acceptance and site approval.

In TTT there has been a substantial emphasis on recruiting new kinds of secondary school English teachers. Admissions to the program is largely by means of a group interview (several applicants with several applicants with several TTT faculty and [current] students as interviewees)--the faculty-student group that makes admissions decisions values especially emotional maturity and commitment, experience with kids, and energy, rather than previous academic experience.

B. Advisement.

Advisement was a responsibility of the Core Faculty. Each member served as an advisor for a number of MAT and PY students. Both student selection of advisors or assignment by faculty were used to pair student with advisor.

C. Instructional Groups.

Major instructional groups included seminars, team taught content classes, and peer taught classes. The core faculties' designed and managed assignments of faculty and sutdents. Assignment, random selection or student chioce were used to schedule students in classes.

D. Evaluation.

The English programs used a number of evaluative techniques during the three years. Common access all three was the use of staffing as a mode of faculty-student assessment and program building. The following summanizes the program's final position regarding grades and grading.

> "1. QPD's and "Transcripts"
>
> The current block of seminars runs through the end of March. The first week of April will be set aside for tying up loose ends from those seminars and for staffing (site-staffing and program-staffing). At this staffing PY's and MAT's should discuss with their Program Advisors suggested QPD's for the year's work. (No QPD will become final until accepted by the Core Faculty at the end of the program year.) A 3.0 QPD will mean: (1) satisfaction of the 13 "Content Goals" published at the beginning of the program; (2) demonstration of the "Teaching Behaviors" (classroom management skills), (3) satisfactory performance on site for the full school year; and (4) successful completion of at least 12 TTT on-campus seminars or the equivalents, including any seminars that may have been individually required (Group Process for everyone; Ed. Research for MAT's; etc.). A QPD higher than 3.0 will mean that in some or all of these components of the program the student has demonstrated excellence.
>
> At this staffing students and advisors should also begin to draft the one page student-specific program descriptions that will go in the students' permanent records. These descriptions will eventually be signed by the Program Advisor, on-site Supervisor, and representatives of the different Pitt departments involved in the program, and attached to general description of TTT-English and a list of the program's Content Goals. Descriptions should concentrate on the site experience and include at least a list of seminars taken. (Program memo March 14, 1973)

E. New Faculty Roles and Relationships.

The main innovative role change in TTT-English has been the extensive use of discipline faculty (from English and Linguistics

Departments) in the field, working with student-teachers and in-service trainees and teaching high school students, and on campus, team-teaching with faculty from the School of Education and planning, administering, and evaluating a teacher-training program.

There has been a heavy reliance on persons not usually formally connected with teacher-training program. Community people have sat on Core Faculties, have run seminars on the nature of their communities for MAT's, PY's, and doctorals, have participated in other seminars to inject a non-academic community viewpoint into the very heart of the academic training process, have frequently sat in on high school classes, and have run evaluations of TTT programs at given sites. Regular teachers have been far more involved in training than usual: rather than a few "master teachers" working with trainees, usually a whole department has been called on to work with TTT, as teaching team members; representative teachers have sat on site committees and Core Faculties monitoring programs; teachers have also been heavily involved in the on-campus seminars, further injecting some salutary reality into the academic process.

II. Core Faculty

A. Composition.

Though the membership changed during the years of operation, the composition by category remained relatively constant including:

Coordinator

English Discipline Representative(s)

Secondary Education (English Education) (Representative)

Reading & Language Arts Representative(s)

Site Representative(s)

Community Representative(s)

Student Representative(s)

B. Major Issues and Responsibilities.

Each Core Faculty delt with the following issues and was responsible for the implementation of its decisions.

1. Complete training responsibility for the English program
2. Advising responsibilities for on-campus program
3. Utilization of other faculty in designing program on campus
4. Coordination of other faculty and doctoral students
5. Atriculation of goals for the program
6. Description of competencies, processes and evaluation model
7. Recruitment, screening, and recommendation of English students
8. Integration of English program with other TTT programs
9. Continual re-evaluation of program goals and processes
10. Continual evaluation of student placement at the site
11. Administration of details for on-campus and on-site programs
12. Evaluation with advisors of student progress in programs

C. Decision Making.

The Core Faculty worked together during the course of the year. Decision making was an evolving process and different core faculties reached closure on different issues through various methods including consensus, vote, co-ordinator choice, etc. A general review of Core Faculty processes follows:

1. Core faculty and advisors meet once every four to six weeks

to establish guidelines for monitoring individual progress,

2. Faculty input sessions related to individual progress of students,

3. Faculty input sessions to involve other faculty in designing program,

4. Weekly planning with other faculty and doctoral students,

5. Weekly general seminars with all persons involved in the program,

6. Program was publicized by faculty; individual and group interviews were set up. Recommendations were made to the site for possible placement of MAT's and PY's

7. Staffing session to evaluate students, advisors responsibilities and supervision by the doctoral students

D. Role of Five Components in Core Faculty

It is difficult to generalize across the five core faculties that conducted English programs with respect to role for each component. Clearly all were represented--all participated at a level they perceived in keeping with their priorities. The discipline faculty were central and actively involved in the program. Education faculty made significant contributions. School and community representatives provided input, but played a less influential role. Student input and influence varied with groups of students and time of the year.

III. Curriculum

A. Pre-Service Curriculum.

The major innovation for the MAT and BA candidate are that the field commitment was especially heavy: 2/3 time, for 10 months. In those 10 months students earn 40 university (graduate or undergraduate) credits, roughly 2/3 of which are specifically for the field work. The on-campus part of the program was also innovative: small seminars, topics usually suggested by students themselves, team-taught by inter-disciplinary faculty and sometimes faculty-student teams, lasting for varying lengths of time.

Students have four major requirements:

1. Satisfaction of "Content Goals" by any means (previous knowledge, work in TTT seminars or at field site, independent work attested to by faculty members, etc.).

2. Demonstration of "Teaching Behaviors", ditto (both these documents are appended).

3. Satisfactory performance in field for a full school year; and

4. Successful completion of 12 TTT seminar-units or their equivalent. In each case, individual programs as highly idiodyncratic, worked out between the student and the faculty (especially the program adviser).

The five programs produced a myriad of mini courses and seminars. Representative as the following list of topics:

I Intro to Teaching Reading

Special Problems in Reading

II Contemporary Critics of Education

Person as Learners - Learning Theory

Group Dynamics & Classroom Activity

School and Community

School as a Social System

Special Problems in the Urban School

Special Problems in Suburban School

The Teacher, Professionalism, & Professional Organizations

Classroom Management

Curriculum Materials for High School English

Contemporary Philosophies in High School English

Imporvesation & Role Playing

Game Simulation: Theory & Practice

III English electives

Adolescent Literature

Oral Interpretation

Special Topics in Literature

Teaching of Writing

Special Topics in Language

Transformational Grammar

Oral Communication

Drama in the Classroom

IV Cross-Cultural Topics

Cultural Relativity

Linguistics

Minority Literature

Dialect Influences on Learning

V The Self

Personal and Interpersonal Processes

B. In-Service Curriculum.

A variety of in-service courses were conducted by the English program. In most cases, courses for MAT's and PY's were taught in the field and were opened to site teachers.

At all field sites, TTT faculty (interdisciplinary) and doctoral fellows worked with resident teaching staff who are team-teaching with TTT MAT/PY's. At some sites (especially Canevin and Warrendale) TTT faculty give formal seminars which were taken by resident teachers, some for university extension credit, some as part of on-site in-service programs. Resident teachers also participate in on-campus seminars, some for credit, some informally. And many resident teachers and pre-professional child care workers have begun formal connections with the university through the agency of TTT faculty.

1. Warrendale: 14 resident teachers and child care workers pursuing university credit with TTT facilite through work in field and on-campus. (1972-73)

2. Canevin: 12 resident faculty involved in on-site in-service seminars taught by TTT faculty. (1972-73)

At these sites, as well as others, many more resident staff are working with TTT faculty and MAT/PY's in curriculum development and implementation, planning, etc., this is one of the most fruitful, realistic sorts of in-service training, training which is organic, resources made available and then used voluntarily by trainees.

Example include work done by Mars (1971-72), Penn Trafford (1971-72) and Oakdale (1971-72).

C. Input from Counselor Education and Reading.

Both Departments provided significant input into the English programs all three years.

Counselor Education provided mini courses in the areas of group processes, human development and adolescent development.

Reading and Language Arts provided mini courses in Reading and Reading Problems; as well as. working with MAT's and PY's in the field with specific reading problems their students were expressing.

IV. Sites

The following summarizes the level of English program trainees per site for the three years of operation.

	1970-71		1971-72		1972-73	
	MAT	PY	MAT	PY	MAT	PY
Mars	4	5	5	2	--	--
Canevin	6	9	4	6	6	4
Penn-Trafford	4	6	5	5	--	--
Oakdale	3	6	2	5	--	--
Braddock	4	10	4	4	--	--
Home for Crippled Children	--	--	--	2	2	2
Warrendale	--	--	--	--	4	2
Bellevue	3	4	--	--	--	--

In general, selection followed availability of English classrooms, interest on the part of the site and diversity among sites to give the program a balance on kinds of institutions.

The varied nature of the TTT-English sites (Youth Development Center, Crippled [Emotionally Disturbed] Children's Home, Parochial High School, Alternative High School) insured student teacher confrontation with a variety of cultures and attendant attitudes. MAT/PY's, doctoral fellows, and faculty all confront this variety regularly, as they rotate among sites (faculty and doctoral fellows) and meet in miscellaneous groupings on campus. The Program's "Content Goals" also require of the students some specific knowledge and understanding of the cultural aspects of language, central to one's equipment as an English teacher--a direct response to the variety of field sites and communities.

B. Organizational Model.

TTT placed a heavy emphasis on team-teaching. At most sites, MAT and PY/TTT students are teamed with each other and/or with resident staff with full responsibility to plan, teach, and evaluate (just as MAT's, PY's, and doctoral fellows join with faculty on campus to plan, administer, teach, and evaluate the program as a whole). This teaming in the classroom allowed for dramatically increased small-group instruction, for more precisely individualized student programs, etc. TTT faculty team-teaching seminars on campus served as possible models (both positive and negative for teaming behaviors; in the field , they served as resources.

Some sites had specific innovations, such as the Learning Center at Warrendale, a media-rich study room, directed by one or two teachers at all times, in which students work in a number of different ways toward goals they have negotiated with the faculty.

D. Supervision.

Supervision was programmed by the Core Faculty. University faculty from both English and Education, doctoral fellows, site teachers and supervisors/administrators all provided supervisory input at some juncture during the year. Peer supervision and teaming was an integral aspect of the program.

E. Comments.

The heterogeneity of the field sites, their varied student populations, and their unique organizational structure placed universal demands on the core faculty to develop a flexible, responsive training sequence. A number of faculty felt that students were not receiving adequate preparation to give a 'regular classroom'. The tension between field needs and program goals was a useful one precipitating a sequence of issues around which those involved might dialog.

V. Doctoral Students

Double practicum arrangements were present in all phases of the program.

A. Double-Practicum in Field.

Each site was coordinated by a faculty member (English Department) as Program Adviser was working with doctoral students (Secondary Education or TTT) or resident staff as supervisors. Additional faculty (Counselor Education, Reading and Language Arts, English, Secondary Education) faculty work from on a pool basis, rotating among sites. Everyone (faculty and doctoral) worked with MAT/PY/Preprofessional's and resident teachers.

B. Double-Practicum on Campus.

1. Seminars, taught by teams of faculty and/or doctoral fellows, taken by MAT/PY/Preprofessional's.

2. Core Faculty, composed of faculty, doctorals, representative students, and community representative which designs, administers, and evaluates program.

VI. General and 'Serendipitors' Outcomes

Innovations at specific field sites will take root as they demonstrate their value. Innovations in teacher-training, seen from the point of view of the university, will be institutionalized as money permits.

University personnel involved during the three years of TTT have all had exposure to new methods and procedures; all have been "retained", and most of the innovations brought about in our classrooms (out of which future teachers come) will continue, through us as teachers.

TTT/ENGLISH. Content Goals

Language

1. The student will have knowledge of at least two systems of English Grammar.
2. The student will have a through knowledge of usage; some knowledge of social and geographical dialects; a realization of the cultural implications of both usage and dialect.
3. The student will have a general knowledge of the history of the English language, with some awareness of its phonological, morphological, and syntactic changes.

Writing

1. The student will have the ability to analyze in detail the strengths and weaknesses in the writing of students and to communicate effectively: e.g., to understand such characteristics of writing as substantial and relevant content; organization; clarity; appropriateness of tone; and accuracy in mechanics and usage.
2. The student will have the ability to produce clear and effective writing.

Literature

1. The student will have a familiarity with the important works of major English and American authors; knowledge of the characteristics of the various genres and of major works in each genre.
2. The student will have the ability to read closely an unfamiliar text of above-average difficulty with good comprehension of its content and literary characteristics.
3. The student will be familiar with a considerable body of literature suitable for adolescents of varying abilities and backgrounds.
4. The student will be familiar with various critical approaches to literature.

Reading

1. The student will demonstrate knowledge of a variety of approaches to the teaching of reading.

Oral Communication

1. The student will have an understanding of the principles of group discussion, group dynamics, panel discussions, classroom dramatizations, and choral reading.
2. The student will be able to speak clearly and effectively, and in conformity with present standards of educated usage.
3. The student will have an ability to read aloud well enough to convey most aspects of the interpretive art--meaning, mood, dominant emotions, varying emotions, overtones, and variety.

TTT/ENGLISH: Teaching Behaviors

Planning

1. The teacher sets clear objectives for classroom activities.
2. The teacher constructs and organized objectives for a variety of classroom activities based on an assessment of students' needs, interests, and abilities.
3. The teacher plans both whole class and small group activities.
4. The teacher plans for continuity in classroom experiences.

Implementation

1. The teacher is prompt in beginning classroom activities.
2. The teacher is successful in initiating students' interests in classroom activities.
3. The teacher is successful in maintaining students' interest in classroom activities.
4. The teacher uses a variety of audio-visual aids.
5. The teacher uses a variety of classroom activities (lecture, small group work, individual reports, panels, dramatization, etc.).
6. The students understand the teacher's directions.
7. The teacher asks questions which make the students think at various cognitive and affective levels.
8. The teacher uses illustrations the students can relate to.
9. The teacher demonstrates approval of student accomplishments during classroom activities.
10. The teacher maintains a positive climate for learning.
11. The teacher develops specific criteria in terms of objectives for evaluation.

12. The teacher uses test and assignment results to help students learn.
13. The teacher returns tests and assignments promptly.
14. The teacher provides for alternative evaluation measures.

Personal and Professional Qualities

1. The teacher demonstrates an appropriate use of language (spelling, usage, diction, handwriting, vocabulary).
2. The teacher develops friendly relationships with students, peers, and school/staff.
3. The teacher demonstrates knowledge of academic content.

PITTSBURGH TTT PROJECT

MATH PROGRAM

E. WILLIAMS (Ed.)

MATH PROGRAM

Co-ordinator

Wade K. Baird (1971-72)

Erma Williams (1972-73)

Discipline Representatives

Earle Myers (1971-73)

Samuel Johnson (1971-72)

School of Education

Fred Bell (1971-72)

Paul Martin (1971-72)

Stewart Milner (1972-73)

Site District Representative - Erma Williams (1971-73)

Community Representative

Helen Bailey (1971-72)

Arie Kyser (1972-73)

Doctoral Intern - Beverly Michael (1972-73)

Doctoral Fellows (1971-72)

Frederick Harris

Beverly Michael

Thomas Seitzinger

Sites

Home for Crippled Children (1971-72)

Penn-Trafford (1971-72)

Westinghouse (1971-73)

Math Program

I. Program Organization

Recruitment and selection of student was a responsibility of the core faculty. Students were recruited form cooperating Districts, PY's and MAT's at Pitt and by publications. Selection was made after review of all materials including personal interviews.

Advisement was a function of all members of the core faculty. Students selected advisors after some period in the program.

The major instructional groups included work in Mathematics, Curriculum, Teaching (during 1972-73) Supervision, etc. Representative schedules are approved.

Each advisor handled evaluation idiosyncratically. Trainees did develop at individual rates and achieve personal goals. Adjustments in schedules, certification, of competency, recommendation for degrees was handled by the core faculty through a staffing process.

II. Core Faculty and Management Model

A. Composition

The core faculty membership consisted of faculty from counselor education (coordinator), secondary education, and mathematics departments, an experienced mathematics teacher released to work with the program, a community representative, and the doctoral students. There was no involvement of the reading and language arts faculty member on the core faculty during 1971-72.

Reflecting upon the effectiveness of the Core Faculty in terms of program policy formation and management leads to the conjecture that persons peripherally involved in the program do little to facilitate effective group functioning. For example, community representation at a program level (unless the person has expertise within the field and therefore functions not in a sociological sense but in a professional sense) is inappropriate. The TTT Math Program was fortunate that the community person worked at Westinghouse and was a parent and was useful in parity sense. Community involvement within sites and at a project level seems much more appropriate. Funds used to provide community input might more judiciously be used to provide additional professional expertise within sites, such as releasing additional experienced teachers to work with trainees and function of the Core Faculty.

Additionally, the absence of a reading and language arts person on the Core Faculty in no way decreased the effectiveness of the Core Faculty, Programmatic decisions do not centrally involve this specialized input, in a mamagement sense, although the reading area is an important skills area for trainee input. Reading and language arts input was a prat of the program during 1972-73 and it provided significant learnings for the involved.

B. Core Faculty Responsibilities.

1. Recruitment, selection, and placement of trainees was a relatevely smooth process.

2. Doctoral students were assigned to the mathematics program based on their academic background and/or interest in the type of

educational agency, i.e., inner-city school, institutionalized programs, or suburban-rural school.

3. Program maintenance meetings were held throughout the year dealing with problems and issues related to program approval (PDE) and students moving through the program. Because most of the Core Faculty was based primarily at Westinghouse and had a continuing relationship (weekly), meetings were effective, including Secondary Education input.

4. Evaluation: Each advisor (a member of the Core Faculty) handled evaluation idiosyncratically. Trainees did develop at individual rates and achieved personal goals. One student was given the option of continuing the program during 1972-73 to demonstrate competency or forego certification. She chose to continue the program and completed the program in December 1973. All trainee programs were approved by the Core Faculty

C. Roles and Functions.

The program coordinator was Wade Baird (1971-72) and Erma Williams (1972-73) the coordinators were responsible for the overall management of the Math Program.

The Mathematics Discipline representative, along with coordinating input in the areas of mathematics and the teaching of mathematics, was responsible for coordinating the field activities of other staff members from the mathematics department who will be assigned to each of the two field sites (1971-72).

Secondary Education representatives coordinated and provided input from the secondary education department in the areas of teaching methods, classroom management, supervision of teaching and other areas related to education.

A site teacher from Westinghouse, Mrs. Erma Williams, will provide input relative to the teaching of math in the secondary schools and overall secondary school procedures.

A community representative, from Penn-Trafford, Mrs. Helen Bailey, gives input to the committee regarding the relationships among the University, the schools, and the communities in which they exist.

A Reading and Language Arts representative will be named to the committee under the rationale that reading the language difficulties may be the root of many learning problems, (1972-73).

III. Curriculum

A. Competency Areas.

1. Mathematics: each student engaged in significant study in the discipline area.

Discipline studies focus on the concepts of algebra, trigonometry, geometry, calculus, probability and statistics, and computer science. Much of the academic background has been obtained through traditional university courses prior to the year in TTT. The thrusts of the discipline input to the TTT Mathematics Education Program was: 1) to examine those topics needed for the reteaching of secondary mathematics which were not provided through regular courses; and 2) to integrate the mathematical background of teacher trainees.

2. Mathematics Methods: each student engaged in significant practicum experiences in teaching strategies as applied to teaching in general and mathematics in particular.

Study of methods of teaching mathematics was provided both by supervision and through seminars. Emphasis of instruction included teaching-learning strategies; models of teaching; diagnosis of individual learning difficulties; behavioral objectives; academic games; individualization of instruction; comparison of mathematics curricula, e.g., Project PLAN with teacher-developed curricula; means of evaluation tion; a comparison of testing and evaluation; and study of processes of learning which could be incorparated in studying mathematics.

3. Common Input: each student engaged in practicum experiences in human development, small group work, communication skills, learning process and evaluation procedures.

4. Field site: each student engaged in the following field experiences.

a) input, management, design, support and evaluation of all aspects of classroom teaching.

b) participation in team planning, team teaching and supervision with peers.

c) participation in curriculum planning and creation of materials and activities for classroom use.

5. Tutorial: each student engaged in some learning activity, for study and evaluation, which is appropriate to the student's personal and professional growth.

B. Individualized program.

Each student with in the TTT program was responsible for developing an individualized plan of studies. This was done in collaboration with an advisor from the mathematics core faculty and incorporates the five competency areas.

C. In-service Courses

The math department conducted two in-service courses for credit for eight Westinghouse faculty (see attached materials).

Input from Counselor Education included experiences in each of the common input areas listed above. In addition, TTT interns participated in a weekly interdisciplinary seminar with students from Counselor Education and School of Social Work.

Reading and Language Arts provided input through a Seminar in Reading Problems.

IV. Sites

The field sites provided different kinds of experiences for trainees although the emphasis at all sites centered around team teaching and individualized instruction. Three sites were used during 1971-72; only one during 1972-73.

A. Westinghouse.

At Westinghouse High School (an inner city school) the emphasis was on small group instruction and developing skills in laboratory approach to learning mathematics. During 1971-72 the project conducted three seventh and eighth grade math classes; during 1972-73 two, eighth grade math classrooms were used.

Differences between field sites (Westinghouse and Penn Trafford) which affected the program during 1971-72 were:

1. At Westinghouse, a room was available specifically as a Math Resource Center for planning, conferences, seminars, etc. At

Penn-Trafford no such space was available for planning, etc. which had an effect on trainees.

2. The available space at Westinghouse was staffed with the experienced teacher from the Core Faculty on a full-time basis, two faculty from the Mathematics department (one day each per week). At Penn-Trafford, one faculty member from Mathematics one day every other week and one doctoral student one day per week were available. Doctoral students at both sites were required to assume Secondary Education input during the latter part of the year because of failure of that faculty to provide input.

3. At some point the Core Faculty might have considered tapping into general seminars being conducted on campus in other programs the thereby relieving doctoral students of some of their assignments. One on-campus seminar in human development was given, but only to trainees from Westinghouse and HCC. Trainees in the Math Program Penn-Trafford felt very much neglected, although they generally approved of the program. Penn-Trafford trainees did participate in some on-site across program seminars with doctoral students but did not see much relevancy in them, which may be due partly to conflicts among the doctoral students involved.

During 1972-73, the entire program centered around Westinghouse High School. A team teaching model was used with the following schedule.

B. Team Teaching

Model - (2 classroom schedules, 6 teachers (MAT's & PY's)

Periods	Rooms 22	Room 24	#Teachers
1	Planning	Team Teaching	2
2	Team Teaching-2	Team Teaching	2
3	Team Teaching-2	Team Teaching	2
4	Team Teaching-2	Team Teaching	2
5	Traditional-1	Team Teaching-2 (3 days) Traditional (2 days)	
6	Traditional-1	Team Teaching	2
7	Traditional	Planning	

C. Site specific activities included.

1. development and staffing a mathematics resource site
2. a mathematics resource laboratory
3. team teaching
4. mathematics curriculum
5. Algebra I for eighth graders (54 students and 2 - enrichment)
groups)

Supervision was shared by the site faculty TTT fellows and interns and project faculty.

V. Doctoral Students

During 1971-72 doctoral students had the major responsibility for teaching areas of group dynamics, personal development, role theory, etc. Also they were responsible for continuing supervision of trainees. As their priorities changed throughout the year reflecting their own experiences in the doctoral program, their energy level around carrying out a very heavy field assignment was drained off, especially with the added burden of teaching methodology. A heavier emphasis naturally evolved around those competencies specific to teaching of mathematics content, less to the human process area. The model used during 1972-73 involved an intern working at the site half time providing supervision and teaching of seminars.

In general the site provided a team arrangement where doctoral fellows and interns worked directly with faculty in all phases of the teacher training process.

VI. Conclusion

A. In general the strength of the program conducted around:

1. its site specific native of Westinghouse
2. good integration of discipline and site faculty
3. the training of MAT's and PY's was closely tied with in-service for a number of site faculty and innovative curricula activities.

Many of those activities directly related to the site will continue beyond the project.

TTT MATHEMATICS SCHEDULE FALL 1972-73

ON SITE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
	Math Seminar	Supervision-- Michael	Math Seminar-- Dr. Myers	Curriculum-- Michael Research Supervision-- Milner
ON CAMPUS		8:00-9:40 Secondary Ed 290 Milner-314 CL		4:00-6:00 Reading Seminar Christian-226 HB

TTT MATHEMATICS SCHEDULE WINTER 1972-73

ON SITE	Math Seminar Dr. Myers	Supervision-- Michael	Math Seminar Dr. Myers Interdiscipline Seminar TTT Social Work Counselor Ed	Computer Seminar Milner
ON CAMPUS	times to be announced Reading Seminar- Christian Behavior Modification- Vogel Human Development- Harden/Michael			

(In-Service)

TTT MATH SEMINAR - Secondary Education 351

Winter Term - 4 credits

Objectives: To discuss background material necessary to develop concepts taught in the Pittsburgh Public Schools Algebra I Scholars program.

To include the following topics in the seminar:

sets and the operations; an overview of the number system; operations and the real numbers; absolute value; open sentences and inequalities; factoring polynomials; exponents and radicals; quadratic equations and inequalitits; introduction to logic; right triangle trigonometry

Texts: ALGEBRA: ITS ELEMENTS AND STRUCTURE (Book 1), by Banks, Sobel and Walsh, (McGraw Hill)

ALGEBRA ONE, (SECOND Edition), by Payne, Zambo[illegible], and Lankford, (Harcourt Brace and Jovanovich)

Time: Mondays and Wednesdays for one hour

Place: Westinghouse High School, room 19

Professor: Dr. Earle F. Myers

Evaluation: Participants will be evaluated orally and by written reports assigned throughout the seminar.

Spring Session - 2 credits

The seminar will have the same structure as the winter term but will discuss the following tipics:

introduction to groups; Venn diagrams and applications; introduction to vectors, matrices, and determinants; step-function; the Euclidean algorithm and diophantine analysis; conic sections, their forms and graphing.

PITTSBURGH TTT PROJECT

PRE-PROFESSIONAL PROGRAM

PRE PROFESSIONAL PROGRAM

Co-ordinator

Andrew Hughey (1970-71)

Wilma Smith (1971-73)

College of Arts and Science

Rae Siporin (Dean's Office and English Department)

George Johnson (New Careers)

Sara McKain (New Careers)

School of Education

Beverly Harden (1970-71)

Hiawatha Fountain (1970-71)

Robert Dilts (1971-73)

Ernest Dorow (1971-73)

Thomas Meade (1971-72)

Field Representative - Richard Harden

Personnel

The University of Pittsburgh TTT Pre-professional Program was created to identify non-degree, school-associated persons who have demonstrated teacher competencies and to provide these persons with an individualized program leading to the attainment of certification as professional teachers. Three major innovational training features of the program focus on current training and past experience. They are:

1. Inter-disciplinary studies,
2. Life experience credits, and
3. Field-orientation.

Through involvement in one-to-one advisement and seminars to determine goals and educational level and to diagnose possible areas of difficulty, each student establishes his individual program on a career ladder, designed by cooperative planning with New Career (College of Arts and Science), Secondary Education, and the major disciplines, leading towards teacher certification. Life-experience credit for involvement in the education of children, (teacher aid, child care worker, etc.) is granted, thereby recognizing and accrediting previous experiential learning. Finally, by providing on-the-job training concurrent with campus cognitive learning and engaging the student in a continual evaluation of self and the program, the TTT Pre-professional Program offers a unique training experience through which future teachers can grow towards understanding themselves and their effect upon children and the teaching profession prior to certification.

The TTT program is directed at broadening the perspective and improving the effectiveness of teacher trainers (who may be college teachers, cooperating teachers, or school proncipals); the trainers of teacher trainers (who may be graduate professors in the Arts and Sciences, professors of education, superintendents of schools or in a variety of other formal positions). Individuals in all of these roles are drawn together with in-service and pre-service teachers and with community members to work out imaginative, effective and socially relevant programs of teacher education.

Specific objectives of the TTT Pre-professional program were:

1. To develop a career ladder program which allows progression form the Pre-T through TTT levels.

2. To develop an understanding toward the profession of teaching.

3. To develop a knowledge of the disciplines: English, Social Science, Mathematics, Natural Sciences, Reading and Language Arts.

4. To develop an understanding of the person and groups.

5. The development of an interaction between all members of TTT training team exchanging knowledge and skills.

Competencies for TTT Pre-professionals are based upon the student's individual development towards acquiring the knowledge, skills, and insights he and his advisor perceive as necessary for his role in the teaching profession. General areas of competency are as follow:

Discipline -- the development of knowledge in the subject areas of English, Social Studies, or Mathematics which comprise the curriculum in secondary level education.

Methods -- the development of skills pertaining to the planning, implementation and evaluation of techniques utilized in a particular subject area, with emphasis upon communication recognition of alternative procedures and individualized instruction.

Self -- focusing on the meaning of self-implications of decisions affecting self, self-identity, intra- and inter-personal dimensions, stressing one's awareness of his experiential self;

Person Development -- focuses on the individual in his own human development through introspection, inspection, and observation--phases of human personality development;

Psychic Processes -- concentrates upon developing competencies within teachers dealing with the affective and cognitive characteristics of learning, with emphasis upon the interdependency and interaction of these domains;

Groups -- is concerned with kinds of groups, group dynamics, individual participation in groups and subsequently reflecting upon one's own behavioral style in groups;

Roles -- in the classroom is the focus of this conceptual area--dealing with social interaction, verbal and non-verbal communication patterns, task orientation, and the relationship existing between organization and classroom management and learning; and

Diagnosis, Feedback, and Evaluation -- provides experiences which develop competencies that organize the interactions between teacher and student concerned with learning--providing a framework within which objective analysis of student needs is a basis for planning, executing and evaluating learning experiences.

Each of these areas is studied at two levels. As a student in a teacher education program, the student experiences the phenomena attending to the implications of the phenomena on his own learning. Secondly, the student analyses the theory of each area and applies the theory to his field experience.

A. Setting.

Due to the emphasis upon on-the-job training concurrent with on-campus cognitive training, the TTT Pre-professional program was divided between two major locations which offer their own unique contributions to the total learning situation. These are:

1. Campus -- Classes and seminars in major area of discipline from College of Arts and Science courses including English, Social Studies, and Mathematics.

Classes and seminars in methods of teaching for a particular subject area.

2. Site -- Teaching experiences in actual classroom situation. Seminars and meetings dealing with pragmatic needs arising from on-site teaching experiences.

B. Basic Strategies and Designs for Description and Evaluation.

Description of the TTT Pre-professional program will be directed towards an examination of objectives, training models, resources (including staff, sites, interns, campus) and processes of supervision, core faculty, and evaluation.

Evaluation procedures will be conducted by examining each of the major areas described, formulating questions based upon proposed aims or functions of these areas, and evoking responses to the evaluative questions from interns and responsible persons within the program. For this final evaluation, the areas to be examined will include: Objectives, Program Content, Activities and Experiences, Core Faculty, Supervision, and Impact of the program.

As a program designed to identify and train persons who have already demonstrated competency working with children in an educational setting, several innovational features operate. These include:

1. Admission and selection procedure - Selection of individuals who have experienced direct contact with children in an educational setting and who need only an increase in cognitive skills to become effective teachers.

2. Provision of opportunity for talented and experienced in individuals who lack only proper credentials for upward mobility in the educational system.

3. "Student Teaching" treated as a process experienced by the individual for two years congruent with the acquisition of discipline materials for present and future teaching.

4. One-to-one advisement in a relevant major for the individual, taking into consideration life-experience, discipline skills, and site-training availability.

5. Life-experience credit for involvement in education of children (teacher aide, child care worker, etc.)

6. Combination of carrying College of Arts and Sciences and the School of Education credits concurrently.

7. Emphasis upon On-the-job training concurrent with on-campus

cognitive training.

8. Continual evaluation of cognitive learning and on-site experience with goal of focusing training on immediate needs at site.

9. Emphasis upon aiding prospective teacher in understanding self and his effect upon children and the teaching profession prior to certification.

I. Program Training

A. Structure of Discipline and Methods.

Sixty credits must be accumulated by Pre-professional students in the College of Arts and Sciences to be distributed over the Humanities, Social Sciences, and Natural Sciences prior to applying to the School of Education.

Field experiences for Pre-professionals afford both cognitive and affective learning in the form of seminars, meetings, descussions and actual classroom experience which provides a laboratory setting for the utilization and teasting of competencies in the disciplines, methods of teaching, and classroom management.

Time involved: one day per week--may be divided into two half day sessions or one hour per day per week.

Pre-professionals are an integral part of the following site experiences:

1. The development of TTT training sites.

2. Observation of teaching styles and techniques in training-site classrooms.

3. Involvement in teaching methods seminars.

4. Involvement in discipline seminars.

5. Involvement in all aspects of TTT on-site planning.

6. Activities which will provide pre-professionals the opportunity to share their knowledge and skills with other TTT personnel.

7. Assisting PY's and MAT's in planning and implementing educational experiences for children.

8. Planning and team-teaching under the direct supervision of doctoral fellows.

9. Developing skills in methods of learning intervention under supervision of doctoral fellows

II. Resources

A. Staff.

Responsibility for the TTT pre-professional program resided in the Core Faculty, an inter-disciplinary decision-making body composed of representatives from:

1. The College of Arts and Sciences in English, Social Studies. and Mathematics;

2. The School of Education in Secondary Education, Counselor Education; and

3. New Careers .

Preprofessional Program Model

First Year

Semester	Location	*CAS Credits	School of Education Credits
Summer	On-Campus	3	
1	On-Campus	6	
	On-Site	3	4
2	On-Campus	6	
	On-Site	3	4
3	On-Campus	6	
	On-Site	3	4

* CAS Credits include the following courses and seminars:

On-Campus: Methods of Teaching English
On-Site: Methods of Teaching Social Studies
Methods of Teaching Mathematics
Contemporary Literature and Readings in the Discipline Area
Other seminars which grow out of needs of students

Suggestions for first year:

(1)		
	Life Experience	30
	CAS	30
	School of Ed.	12
	TOTAL	72

(2) Apply to School of Education after 60 credits

Second Year

Semester	Location	Major Discipline Credits and/or CAS Credits	*School of Education Credits (Prof. Cert. Requirements)
Summer		3	3
1	On-Campus	6	
	On-Site	3	4
2	On-Campus	6	
	On-Site	3	4
3	On-Campus	6	
	On-Site	3	4
Summer		6	

*These site experiences are equivalent to the following School of Education courses:

1. Secondary Education Methods
2. General Methods of Teaching
3. Foundations of Education
4. Educational Psychology

Suggestions for second year:

CAS and Major Credits	36	
SChool of Education	15	
TOTAL	51	(second year)
	72	(first year)
	123	- Graduation Requirement

B. Common Input.

On-campus experiences with Doctorals, MAT's, and PY's, in self, groups, person, human development and diagnosis and development.

On-campus experiences in disciplines and methods requirements with PY's and MAT's.

An over-all view of the Pre-professional program would reveal an involvement in the following activities on-campus and on-site:

1. Pre-professionals take courses on-campus in the College of Arts and Sciences.

2. Pre-professionals are involved in the following classroom activities:

   a) conduct small group instruction,

   b) conduct micro-teaching situations,

   c) deliver large group lectures,

   d) assume responsibility for classroom management, and

   e) observe various styles and techniques in other training site classrooms.

3. Pre-professionals participate in team-teaching and planning activities with PY's, MAT's, Doctoral fellows, and master teacher.

4. Pre-professionals attend on-site seminars in disciplines and teaching methods.

5. One-to-one involement in counseling and advising activities with students.

6. Meet periodically as members of TTT planning team to share knowledge, skills, and experiences of classroom management.

7. Participate in periodic student evaluation and subsequent decisions resulting from insights.

8. Involved in studies and experiences designed to argument awareness of the Person and Group.

9. Attend regular on-site teachers' meetings.

10. Increase awareness of community concerns through involvement in discussions, meetings, seminars, etc.

C. Sites.

Twenty-five Pre-professional students were involved at the following sites during 1971-72.

Site	# of Preprofessionals
Braddock	6
Canevin	2
Home for Crippled Children	12
Mars	2
Oakdale	2
Westinghouse	1
TOTAL	25

A Visual representation of the Organizational Pattern or Site Model for the TTT Pre-professional program is as follows:

LIBERAL ARTS

English
Mathematics
Social Science
Science

Oakdale   Broddock   Home for Crippled Children   Westinghouse   Canevin   Mars

EDUCATION

Secondary Ed.
Counselor Ed.
Reading & Language Arts

A syllabus of on-campus courses for Pre-professional students is provided in the College of Arts and Sciences Bulletin which describes offerings in the areas of English, Social Studies, and Mathematics. Additional TTT courses provided on-campus and on-site in the first year inslude the following:

1. Methods of Teaching English (Social Studies, Mathematics) Core provided by common readings. Emphasis upon theoretical and practical use of teaching techniques as related to subject area.

2. Contemporary Literature and Readings in the Discipline Area

Examinations through reading and discussion of current writings in the discipline area with emphasis upon the student's awareness of contemporary thought and educational implications of the discipline.

3. Human Development. Emphasized personal growth of the student through a series of group experiences and encounters designed to stimulate self-awareness, introspection and insights into personality development.

III. Processes

A. Core Faculty Activities.

As an administrative, rather than evaluative group, the core fadulty engages in numerous decision-making activities in relation to selection, program-planning and implementation of Pre-professional experiences. These include:

1. Prospective Pre-professionals nominated to core faculty from TTT sites.

2. Pre-professionals selected by core faculty during the summer prior to first semester of entry to program.

3. Pre-professionals selected by core faculty on basis of:
    a) strength of recommendation from site, and
    b) prior experience in an education setting as a teacher aide, child care worker, etc.

4. Core faculty provides a summer seminar for the following purposes:
    a) introduces Pre-professionals to the Pre-professional TTT program, and
    b) reacquaints Pre-professional to academic responsibility as

a student,

c) orients Pre-professionals to the discipline areas in which they may major,

d) provides Pre-professionals with an opportunity to experience themselves, their goals and ideas in relation to other Pre-professionals,

e) gives them an opportunity to view the teaching profession in perspective; its goals, current dilemmas, and their involvement in perpetuating or altering these,

f) affords diagnosis of reading and/or writing difficulties which might hinder their academic progress, and

g) provides opportunity for registration in on-campus courses for fall.

5. Core faculty evaluates students' previous college credits to ascertain possibility of granting advanced standing.

6. Core faculty meets periodically for the following:

a) to decide relevant site experiences in which Pre-professionals must participate in order to receive equivalent University credits,

b) to discuss progress made by Pre-professionals at the site and on-campus based upon supervisor's evaluation vis-a-vis evaluation from on-site faculty, TTT doctorals, and other University faculty on the site,

c) to discuss continual progress of Pre-professional on-campus, i.e., his academic progress in regular University courses,

d) to make recommendations to those persons involved in supervision, teaching and other involvements at TTT sites, and

e) to plan a continuous program for re-evaluating purposes and promoting alternatives where necessary.

B. Supervision.

As a prosition of liaison between students and administration, the supervisor is one of the key elements in the implementation of TTT philosophy. Basically, developmental supervision of students occurs at each site, the model of observations and meetings established by the personnel at each site. For example, at Braddock supervision was conducted by team members, doctoral students, teachers, and site supervisor. At Mars, students worked with cooperating teachers and the site supervisor. Oakdale provided evaluation and supervision by peers, teachers at the site, advisors, and administrative staff. Canevin students were observed and assisted by cooperating teachers, doctoral students, and the department head. At the Home for Crippled Children, doctoral students (including two site coordinators) carried most responsibility for supervision, with additional assistance provided in the areas of History and English by both faculty and graduate students from the University of Pittsburgh and Carnegie-Mellon University. At the Home each Pre-professional was observed at least once per week on a monthly rotation system, providing the opportunity for supervision experiences with individuals of various specialization areas.

C. Faculty/Intern and Intern/Intern Interactions.

For a description of interactions between Pre-professional and core faculty, (refer to section III. - number 4-a) Core Faculty. During their course of study, Pre-professionals share certain common experiences with faculty, primarily supervision, classes, and seminars designed to meet the particular needs of a Pre-professional on-site and on-campus. Their interaction with other students occurs formally in meetings, classes, and team-teaching projects as well as informally in discussions and after-class sessions. More specifically, the requirements of each site and the various combinations of personnel created some differences in interaction. For example, at Braddock, students participated in fourteen on-site planning sessions, site seminars, and weekly team meetings in which discussions centered on such issues as how to conduct classes on a team teaching basis, delineation of individual duties, evaluative procedures, and diagnosis of team's needs. At Mars, planning meetings with TTT teachers occurred weekly, each team comprised of one MAT, one PY, and one Pre-professional. Personal evaluation was also conducted in weekly on-site meetings designed to assess past experiences as well as explainfuture activities. Experiences at Canevin included team-teaching meetings, group management seminars, conferences with supervisors, classroom teachers, and department head, and group planning sessions to discuss student evaluation, discipline, etc. At Oakdale, students participated in on-site seminars for planning a new treatment center and in meetings for the purposes of evaluation, sharing peer-group experiences and discussing areas of interest with teachers at the site. The Home for Crippled Children held weekly planning meetings for PY's and PP's and doctoral supervisors in the major area of concentration (i.e., - English, Scoial Studies, etc.). Monthly curriculum meetings concentrated upon courses to be planned and taught individually by Pre-professional's during the following month.

These sessions, moreover, afforded opportunity for peer supervision-criticism, and brain-storming.

IV. Evaluation

A. Program Evaluation.

1. External evaluation - for the PY Program has taken the form of two major reports--one an accreditation visitation report for the State, and another, the ABT Association Report for the Office of Education. These documents may be referred to for program details.

2. Self-evaluation - of the program is conducted by the core faculty which meets periodically to formulate policies and decisions concerning personnel and program development.

B. Intern Evaluation.

1. Self-evaluation - throughout the year, PP's are encouraged to evaluate their own progress and diagnose their particular needs as they relate to teaching/training experiences. In a final PP evaluation, students expressed satisfaction with personal growth, particularly in the areas of increased self-confidence, competency, and matriculation. Actual teaching experiences were credited with having supplied the opportunity and necessity for acquiring teaching skills and utilizing them in a real classroom situation.

2. Peer evaluation - Interaction between peers has been described earlier (in this report) and included weekly team-meetings and general sessions among PP's, teachers, and supervisors during which evaluation, constructive criticism, and planning occurred.

3. Faculty/Intern Interactions - Evaluation for seminars and on-site classes is the responsibility of instructors--doctoral students

and University faculty teaching the courses required for accreditation and those requested by PP's at each site.

4. Supervision - Beside weekly observations and meetings between supervisors and PP's, evaluation is conducted in on-site staffings during which PP's are signed off on various competencies by supervisors. These sessions may occur during the year as part of a developmental program, they occur necessarily at the conclusion of the school year for purposes of granting credits for teaching experiences and on-site seminars. An example of competencies developed for Social Studies at the Home for Crippled Children is as follows:

C. History Component.

Social Studies Concepts (3-6 credits for Social Studies Concepts)

1. Identification and Development of Concepts
2. Concentration on History, Geography, Economics,

Political Science, Sociology and Area Studies all course plans must be organized around these concepts. Thus component is "curriculum development".

D. Education Components.

Methods of Instruction in Social Studies

1. Classroom Techniques:
   Individualization
   Inquiry
   Team Teaching
   Use and development of Materials in Social Studies
   value clarification
   Simulation and Role Playing

2. Special Education:

Teaching Theory

Learning Theory

Group Interaction

Reading

Establishment of contracts - overview of all areas for Social Studies majors (try to provide alternative areas for experience) to be included in contracts--stipulation of activities (research?)

contract for Methods on 2 contracts

1 contract for Social Studies

1 contract for Teaching and hearing strategies

27 credits
15 student teaching

12 + 3 sections - (in methods (4 in 2)
(in teaching and hear strategies (4 in 1)

3. Grades for University courses - PY classes taken at the University are credited by letter grades from the instructor and recorded on the student's transcript.

4. Core Faculty - After final evaluation and staffing occurs at the site, description of competencies met by PY's is communicated to the core faculty which then translates these experiences into the 15 credits in Education and College of Arts and Sciences seminar credits on a pass/fail basis.

PITTSBURGH TTT PROJECT

SCIENCE PROGRAM

M. MUEHLKE (Ed.)

Science Program

Coordination and Management

Coordinator - Marjorie Muehlke

School of Education Representative - Marjorie Muehlke

Site District Representative - Doris Litman (Allderdice

Sites

Home for Crippled Children

Oakdale

Taylor-Allderdice

Warrendale Youth Development Center

Other Faculty

Joseph Mrochek

Doctoral Fellow

Eleanor Barovitch - Home for Crippled Children

SCIENCE PROGRAM

Description of the TTT Training Program for Professional Year (PY) and Master of Arts in Teaching (MAT) Students in Science

Personnel Involved In The TTT Science Program

A. Faculty and Instructional Staff

Name	Role
Dr. Marjorie Muehlke	TTT Science Program Coordinator University of Pittsburgh Department of Secondary Education
Mr. Joseph Mrochek	Supervisor and Instructor of PYs & MATs University of Pittsburgh Department of Secondary Education
Ms. Doris Litman	Site Coordinator, Supervisor, Instructor Taylor-Allderdice High School Science Department Chairman
Mr. Hartman Pogue	Supervisor, Instructor of MATs-Summer Workshop, University of Pittsburgh TTT Doctoral Program Intern
Mr. Richard Harden	Instructor, Human Development HCC staff and University of Pittsburgh, TTT Doctoral Intern
Ms. Beverly Michael	Instructor, Human Development University of Pittsburgh TTT Doctoral Student

B. Professional Year and Master of Arts in Teaching Students

Name	Science Subject(s) Taught	Site
Mr. Edward Henke(MAT)	physics, general science	Taylor-Allderdice H.S.
Ms. Sara Henderson(MAT)	biology	Taylor-Allderdice H.S.
Mr. Tim Schmidt(PY)	biology	Taylor-Allderdice H.S.
Mr. Harry Lewis(MAT)	chemistry, biology, general science	Oakdale & Warrendale Youth Development Ctr.
Mr. Tom Klasterka(MAT)	earth & planetary science, general science	Oakdale & Warrendale Youth Development Ctr.
Mr. Dave Chesebrough(PY)	physics, math 8, chemistry, biology	Home for Crippled Children
Ms. Loretta Stana (cert.)	chemistry, biology	Home for Crippled Children

C. Cooperating Teachers

Ms. Amelia Brusca	biology	Taylor-Allderdice H.S.
Mr. Jack Salsi	biology, general science	Taylor-Allderdice H.S.
Mr. Walter Treser	biology, general science	Taylor-Allderdice H.S.
Mr. Michael Shore	physics	Taylor-Allderdice H.S.
Mr. Joseph Perz	biology	Taylor-Allderdice H.S.
Mr. Henry DeLuca	biology, general science	Warrendale Youth Dev. Ctr.

Sections I through VI attempt to respond to the guidelines for program description provided by Dr. Ruch. Section VII was added to provide information on the occupations of those who participated as PYs and MATs in the science program after the conclusion of the program.

Science Program

I. Program Organization

A. Recruitment and Admission.

TTT programs for both PYs and MATs were advertised by means of posted signs. Individuals were encouraged to attend general information sessions with Dr. Robert Dilts who in turn referred those interested in the science area to Dr. Marjorie Muehlke in the Department of Secondary Education. All scinece education professors in the Department of Secondary Education were also asked to inform their advisees about the program.

Prospective PYs and MATs submitted application forms and support supporting documents. An interview committee composed of individuals responsible for various activities in the 1971-72 TTT science programs was set up, and individual interviews were held in April of 1972. Committee members consisted of the following:

1. the four TTT doctoral students who worked at four different science sites--Hartmen Pogue, Tom Seitzinger, Gordon Pike, and Dan Nasman; and

2. the two Secondary Education doctoral students who worked with the program--Mary Sweeney and Don Hannon; and the Secondary Education faculty representative--Marjorie Muehlke.

Interviewees were encouraged to talk with 1971-72 TTT science participants who were available prior to and after the interviews.

Some of the interviewees whose situations potentially allowed them to participate in the 1972-73 program at one particular site only had visited that site prior to the interviews and were able to ask questions about that specific situation.

At the time of the interviews it appeared that only three sites would be available for science participants the Oakdale Boys' Home, and the Home for Crippled Children (HCC) both of which required students who could teach several sciences, and Taylor-Allderdice High School at which positions were available in biology, physics, and general science for eighth grade scholars. One of the difficulties in attracting MAT participants to the program was the fact that only two stipends were available, both at Oakdale. Undergraduates (PYs) would receive two-thirds of their tuition in the TTT program which was attractive to th those who had no other financial assistance. Although MATs would receive full tuition, those not receiving the stipends would have been in better financial situations if they had entered the Department of Secondary Education's regular MAT internship program. The two stipends available for the 1972-73 program, in contrast with the twelve offered during the previous year, represented a significant decrease in this type of support for MATs.

Candidates accepted by the interview committee then scheduled interviews with representatives of the sites for which they had been tentatively accepted. Final acceptances were those included in the list at the beginning of this report.

B. Advisement.

Since the number of students who participated in the summer portion of the program was very small (three), and the number continuing or starting in the fall term was only seven, advisement was neither a time consuming nor difficult rask. Advisement relative to general program decisions was handled by the coordinator, M. Muehlke and the Secondary Education doctoral student J. Mrochek. Advisement on specific teaching problems was handled by cooperating teachers at the sites, and supervisors.

C. Instructional Groups.

Since the number of participants was small, it was never necessary to divide the group up for purposes of achieving effective small group instruction. For specific TTT seminars, some differences in group composition were arranged as indicated in Table 1.

Seminars at Pitt were conducted by M. Muehlke while site seminars were a joint effort between site and university personnel. At Taylor-Allderdice, D. Litman performed important functions in those site seminars, and H. DeLuca performed a similar function at the Warrendale seminars. J. Mrochek provided a special methods seminar for the PY at the Home for Crippled Children.

Student assignment to the seminar groups shown in Table 1 was related to:

1. the site at which they taught and
2. whether they were PYs or MATs.

Taylor-Allderdice interns participated in the seminar at that site, Warrendale interns took part in the Warrendale seminar, and all interns attended the seminars at the university. Since requirements for PYs and MATs differed to some extent, the winter seminar at Pitt was for MATs while the PY had a special session. Since he became an MAT in the spring, the spring seminar was for all interns.

Table 1

MAJOR INSTRUCTIONAL GROUPS AND THEIR COMPOSITION

Term/Session	Character of Instructional Group	Category and Number of Students
Summer 1972	Daily seminar for all non-certified MAT candidates	MATs - 3
Fall 1972	Site seminar--Taylor Allderdice	MATs - 2 PY - 1
	Weekly seminar - Pitt	MATs - 4 PYs - 2 Cert. Student-1
Winter 1973	Site seminar - T.A.	MATs - 2*
	Site seminar - Warrendale	MATs - 2
	Weekly seminar - Pitt	MATs - 4
	Weekly seminar - HCC	PYs - 1*
Spring 1973	Site seminar - T.A.	MAT - 1**
	Site seminar - Warrendale	MATs - 2
	Weekly seminar- Pitt	MATs - 5

* One PY left the program at the end of the Fall Term.

** One MAT withdrew from participation in the major part of the program but continued on a part time basis.

D. Grades, Evaluation and Advancement.

TTT interns in science took regular university courses in addition to the TTT seminars. Evaluation and grading in the non-TTT courses was conducged independently of the TTT program by the professors who taught these courses. All used the letter grade system--A, B, C, D, F.

Participation in TTT seminars and quality of teaching were evaluated through "staffing" procedures. Participants in this process included the coordinator, M. Muehlke, the Secondary Education doctoral student, J. Mrochek, individual interns, and the coordinator of the site at which the intern was teaching. Because the number of participants in the program was small, difficulties in progress through the program were analyzed and dealt with on a continuing basis. MATs were required to design, carry out, and file a written report of an acceptable educational research project which involved the students they were teaching in science. These were evaluated and graded (letter grade basis) by the coordinator.

E. New and Significant Faculty Roles.

Two roles for Secondary Education faculty, which had not been a predominant part of previous programs, evolved in the TTT program. These were:

1. conducting teaching seminars with interns at the teaching sites (in contrast with conducting these at the University), and

2. conducting seminars for university credit with resident teachers at the sites.

II Core Faculty

A. Composition and Organization.

The core faculty in the science TTT program was small during the 1972-73 academic year in comparison with 1971-72. Core faculty members for these two years are shown in Table 2 with their functions for purposes of comparison.

Table 2

TTT SCIENCE CORE FACULTY FOR 1971-72 AND 1972-73

Dept./Area	Name	1971-72 function	1972-73 function
Counselor Ed.	R. Campbell	Coordinator of core faculty	---
Secondary Ed.	M. Muehlke	Secondary Ed. representative, teaching, supervision	Coordinator of core faculty, Secondary Ed. rep. teaching, supervision
TTT Doctoral Students	H. Pogue	teaching,supervising observing	teaching, supervising, Summer Session only
	T. Seitzinger	same	---
	G. Pike	same	---
	D. Nasman	same	---
Secondary Ed. Doctoral	M. Sweeney	same	---
	D. Hannon	same	---
	J. Mrochek	---	teaching, supervising observing full year
Community Rep.	B. Norris	Program- community liason	---
TTT Extern	D. Litman	consultant	Site Coordinator Taylor-Allderdice H.S.

Major differences between core faculties during these two years included the following:

1. assumption of the two roles of core faculty coordinator and Secondary Education faculty representative by the Secondary Education faculty member;

2. reduction in the number of TTT doctoral students from four to none--with the exception of one who was an active instructor in the initial phase of the 1972-73 program during the summer session;

3. loss of the community representative; and

4. reduction in the number of Secondary Education doctoral students from two to one.

B. Issues and Problems Confronted by the Core Faculty.

In planning for the summer program, M. Muehlke, J. Mrochek, and D. Litman met several times during the spring and summer to plan for the fall, winter, and spring portions of the program. Core faculty meetings during the year had three major functions:

1. planning future activities,
2. evaluating past seminars and activities, and
3. discussing problems of individual interns.

C. Decision Making.

Core faculty decisions resulted from group discussions in which all were encouraged to participate. Majority decisions became effective.

D. Roles of the Five Components.

The TTT science program had no faculty members from Liberal Arts and no community representative. The most active participants were the Department of Secondary Education faculty member and doctoral students who supervised interns and conducted seminars throughout the year, the TTT doctoral student who directed half of the summer program, the Taylor-Allderdice site coordinator who assisted in general planning and evaluation, and coordinated supervision at Taylor-Allderdice and led site seminars.

School district personnel were actively involved in planning prior to program initiation at Taylor-Allderdice. The principal, vice principal of Taylor-Allderdice met with TTT science program and project representatives in the spring of 1972 to discuss the feasibility of initiating a TTT science program there. Their critiques and ideas were most valuable in planning an effective program, and their cooperation throughout the program was encouraging.

The principal at Warrendale and an Allegheny County Intermediate Unit official, Mr. William Currie, were both involved in the transfer of two sciene interns from Oakdale to the Warrendale Youth Development Center. They were initially enthusiastic about the potential participation of these interns, and they managed to work out budgetary problems so that the interns could continue receiving stipends. This took much persistence on their parts, and was indicative of their interest in the participation of these interns.

Since the Home for Crippled Children was a continuing site (two TTT PYs in science had taught at that site during 1971-72), no new negotiations with them were necessary. The science PY and certification student who were at the Home for Crippled Children participated in frequent sessions with the other interns (English and Social Studies) and the Home for Crippled Children faculty and staff. Science interns who were not at the Home for Crippled Children worked with one Home official, Dick Harden, during a seminar he offered on human development for all interested PYs and MATs late in the winter term.

III. Curriculum

A. Curriculum for PYs and MATs.

Since the number of participants in the science program was small, individualization was easily accomplished. There were two major groupings of courses and activities. The former included:

1. TTT science seminars at the sites and at the University;
2. elective, non-science, TTT seminars offered to all TTT PYs and MATs; and
3. supervised teaching.

The latter included regular university course in the sciences, history or philosophy of science, and non-TTT electives. The regular university courses taken varied among science MATs and PYs were taken for the following reasons:

1. science course needed to satisfy certification requirements in one or more areas;
2. science course desirable to provide breadth of science background;
3. history or philosophy of science course highly recommended for masters degree students;
4. elective chosen to meet need or interest; and
5. course needed to fulfill requirements of another program

(the PY at the Home for Crippled Children was also a participant in the university's Science Teacher Development Program).

Courses taken by the five individuals who completed (or nearly completed) the program are shown in Table 3 with the rationale for choice of course indicated as one of the five reasons stated above.

Table 3

UNIVERSITY COURSES (NON-TTT) TAKEN BY TTT MATs AND PYs IN THE SCIENCE PROGRAM

STUDENT	COURSES	RATIONALE
E. Henke (MAT)	E & Pl. 780	1
	Biology 780	1
	HPS 14	3
	Ed. Com. 141	4
T. Klasterka (MAT)	Geogr. 221	1
	E & Pl. 120	1
	E & Pl. 81	2
	HPS 780	3
H. Lewis (MAT)	Astron. 786	1
	E & Pl. 780	1
	E & Pl. 81	2
	HPS 880	3
S. Henderson (MAT)*	E & Pl. 781	1
	Phil. 881	1
	Sec. Ed. 220	4
D. Chesebrough (PY)	Math 115	1
	Physics 86	1
	Music 711	4
	Sec. Ed. 171	4
	Sec. Ed. 200	5

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*Was unable to complete program. One additional course in science needed.

Descriptions of these courses are found in the bulletins of the College of Arts and Science or the School of Education of the University of Pittsburgh.

Credit for TTT seminars and teaching was given in blocks. The actual number of credits differed somewhat among participants depending on the number of non-TTT credits taken. Each student could take a maximum of 16 credits each term, and eight during the spring and summer sessions. A summary of the TTT portion of the program for MATs is included in Table 4.

The six week summer workshop for MATs met daily in Room G-26 in the Cathedral of Learning. During the first three weeks, a wide variety of topics related to the teaching of science were presented and discussed.

During the second three week period, the MATs taught and participated in seminars at Oakdale. This was the site at which two of them would continue teaching in the fall, while the third would teach at Taylor-Allderdice High School. Probable the most important experience of this part of the program was the initial exposure to the Oakdale youngsters, which was a new and somewhat frightening experience for the interns. Having some knowledge of what to expect from these youngsters, the MATs who would teach there could plan realistically for the fall during the interim between the end of the summer workshop and the beginning of the fall term.

Weekly university seminars met in 210 Thaw Hall, a room used exclusively for science education classes throughout the year.

Table 4

TTT COURSES, CONTENT, AND INSTRUCTORS FOR MATs

Term/Session	Course No.	Credits	Content	Instructional Staff
Summer 1972	Sec. Ed. 167	8	Science Methods, Pre-intern teaching at Oakdale.	Pogue, Muehlke, Mrochek
			General Sessions-Common Input	Counselor Ed. Staff
Fall 1972	Sec. Ed. 246	9-12	Science Methods, Ed. Foundations, supervised teaching.	Muehlke, Mrochek, Litman
Winter 1973	Sec. Ed. 247	9-12	Science Methods, Ed. Research, supervised teaching.	Muehlke, Mrochek, Litman
			Human Development (Reading*)	Harden (TTT Doctoral student) & Michaels
Spring 1973	Sec. Ed. 248	8	Ed. Research, Completion Res. Project Supervised Teaching	Muehlke, Mrochek Litman

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* Optional. One student attended several sessions, but conflicts with other classes prevented weekly attendance.

Table 5 provides information similar for the PY in the program.

Table 5

TTT COURSES, CONTENT, AND INSTRUCTORS FOR PY AT HCC

Term/Session	Course No.	Credits	Content	Instructional Staff
Fall 1972	Sec. Ed. 188 Sec. Ed. 117	9 1	Science Methods, Ed. Foundations, Supervised Teaching, Seminars HCC	Muehlke Mrochek HCC Staff
Winter 1973	Sec. Ed. 189	9	Science Methods, Supervised Teaching HCC Seminars Human Development	Muehlke Mrochek HCC Staff Harden & Michaels
(PY became MAT at the end of the Winter term)				
Spring 1973	Sec. Ed. 248	6	Supervised Teaching, HCC Seminars	Mrochek, Muehlke HCC Staff

Taylor-Allderdice seminars met Tuesdays on a weekly basis throughout the year in one of three classrooms which was not being used for teaching purposes at the time. Warrendale seminars met during the winter term at the home of Henry DeLuca, Tuesday evenings.

B. In-Service Courses.

Five Taylor-Allderdice teachers who worked with the TTT science program either as cooperating teachers or faculty liason received university credit for participation in a weekly in-service seminar held at the school. (Teachers who were not at the time enrolled in programs at the University had to submit applications and be admitted to either a post-baccalaureate or masters degree program.) Teachers could register for a maximum of nine credits for the year. Other science teachers who had non-TTT student teachers from the University of Pittsburgh or Carnegie-Mellon University occasionally attended these sessions. Facilitators, Taylor-Allderdice Teachers and TTT interns or non-TTT student teachers are listed in Table 6.

C. Input From Counselor Education and Reading.

The input from the Department of Counselor Education included "common input" for MATs durring the summer session and a course in Human Development for both MATs and PYs during the winter term. Descriptions of these are included in Appendix A. The summer sessions provided situations in which MATs involved in the four areas of TTT teacher preparation--science, English, mathematics, and social studies--could interact. In addition to serving as an informative part of the total program, the Human Development course provided the data for one

Table 6

INDIVIDUALS INVOLVED IN THE TTT SCIENCE PROGRAM AT TAYLOR-ALLDERDICE

First Semester

Facilitators

Dr. Charles Ruch	TTT Project Director University of Pittsburgh
Dr. Marjorie Muehlke	Co-Site Coordinator Secondary Education Department Science Education University of Pittsburgh
Doris Litman	Co-Site Coordinator Science Department Chairman Taylor-Allderdice High School
Joseph Perz	Faculty Liaison Science Department Taylor-Allderdice High School

Taylor-Allderdice Teachers	TTT Interns
Amelia Brusca, Biology	Sarah Dreher University of Pittsburgh
Walter Treser, PSP Science Grade 8	Ed Henke University of Pittsburgh
J. Michael Shore, Physics	Ed Henke University of Pittsburgh
Jack Salsi, Biology	Tim Schmidt University of Pittsburgh
Nancy Fitzgerald, Chemistry	*Mickey Samples Carnegie Mellon University

Table 6 (cont'd)

Second Semester

Facilitators	
Dr. Charles Ruch	TTT Project Director University of Pittsburgh
Dr. Marjorie Muehlke	Co-Site Coordinator Secondary Education Department Science Education University of Pittsburgh
Doris Litman	Co-Site Coordinator Science Department Chairman Taylor-Allderdice High School
Amelia Brusca	Faculty Liaison Science Department Taylor-Allderdice High School

Taylor-Allderdice Teachers	TTT Interns
Joseph Perz, Biology	*Constance Minninger University of Pittsburgh
Walter Treser, PSP Science Grade 8	Ed Henke University of Pittsburgh
J. Michael Shore, Physics	Ed Henke University of Pittsburgh
Jack Salsi, Biology	*Constance Minninger University of Pittsburgh
Dolores Kubiak, Chemistry	*Mark Sampsell Carnegie Mellon University
David Nagy, Chemistry	*Alan Meden Univeristy of Pittsburgh
Linda Bush, Physics	*Bernard Luksich Carnegie Mellon University

* Attended meetings, but where not in the TTT program

instructor's doctoral dissertation.

A reading course was provided during the winter term. One of the science MATs was able to attend some of these sessions, but the others had schedule conflicts. Science interns were therefore not able to take full advantage of this offering.

The major topics discussed during the seminars, attended by both teachers, and interns were the following:

1. the role of the student teacher,
2. the role of the cooperating teacher,
3. development of a list of competencies to be achieved by student teachers,
4. the process of inquiry in the science classroom,
5. writing behavioral objectives in the cognitive domain,
6. the art of questioning,
7. providing for the non-motivated or slow-learning science student,
8. the role of computer assisted instruction in science teaching,
9. Project Solo,
10. individualized instruction in science,
11. the Oakleaf Project,
12. contemporary learning theories,
13. unified Science: An Integrated Science Curriculum,
14. models of integrated science teaching, and
15. models of teaching.

Seminar participants read material provided in handouts or books in preparation for each session. The weekly meetins proceeded largely through discussion. Examples of the devices that were used in seminars to stimulate discussions are included in Appendix B. The "Teacher Competencies" list was used to guide the teacher and the TTT intern in developing criteria for evaluation of the intern's progress in the program. The outline for "Developing Question-Answer Skills" helped to focus attention on this aspect of classroom communication. The "Science Classroom Activity Checklist" wss used by both cooperating teachers and TTT interns to assess their own classroom behavior. During the spring session participants purchased the book, Models of Teaching by Bruce Joyce and Marsha Weil. Teaching models presented there served as foci for discussions.

During the winter term, a seminar was also held with the two science MAT interns at Warrendale and their cooperating teacher. There were two major concerns in these meetings, both of which were highly specific to the Warrendale situation. The first involved revising an instrument which was to be used to assess the progress of individual students. Since students came to Warrendale with very different academic backgrounds, interests, and skills, their program had to be highly personalized. It was particularly important in this situation that evaluation be based on personal progress of each individual, not on comparisons among students.

The second major activity during the seminars was the development of modules which students would use on their own or in small groups. Guidelines developed for creating these modules included in Appendix C. (The modules were refined and then put on to audio tape by a student teacher who taught at Warrendale during the summer of 1973, immediately after the TTT interns had left.)

IV. Sites for the Program

A. During the 1971-72 year, MATs and PYs in the TTT science program taught at the following sites:

1. Penn and Trafford High Schools, Penn-Trafford School District,
2. Mars Area High School and Middle School, Mars Area School District,
3. Home for Crippled Children, Pittsburgh, and
4. Oakdale Boys Home, Oakdale.

The Penn-Trafford and Mars Area sites withdrew from the program when the 1971-72 program ended, so it was obligatory that additional sites for science interns be located for the 1972-73 program.

Due largely to the efforts of Mrs. Doris Litman, Science Department Chairman at Taylor-Allderdice High School and a TTT doctoral student, arrangements were made to make Taylor-Allderdice a site for several science interns. Since these positions would not afford stipends to the prospective MATs, these who would fill these positions could not count on this financial support.

The Oakdale Boys Home closed late in 1972, after two science interns (and a number of others in English and social studies) had taught there for approximately three months. This necessitated their relocation. Since these MATs were receiving stipends (without which they indicated they could not continue in the program), the new site had to be one which could pay them at the same rate. Arrangements were finally made with the Warrendale Youth Development Center (WYDC) to have these interns share a science teaching schedule with the Warrendale science teacher. These two interns thus moved from a situation in which they alone were responsible for the science teaching to one in which they worked as a team with an experienced teacher.

Two science PYs had taught at the Home for Crippled Children during the 1972-73. Of the prospective participants interviewed, only one was:

1. acceptable to the interviewing committee,
2. acceptable to the Home for Crippled Children staff,
3. interested in teaching at the Home for Crippled Children, and
4. entering his senior year, making him a prospective PY.

It appeared that this student would be the only TTT science participant at the Home for Crippled Children. Several days before the program began, however, a student who had already completed a masters degree in science and who wanted to become certified to teach in the secondary schools was admitted as a special certification student to the TTT science program. She taught at the Home for Crippled Children during the fall term only. There were therefore, two TTT science teachers at the Home for Crippled Children during the fall term, but only one during the winter term and the spring session.

Three sites thus emerged as the major locations for the TTT Science program. A large urban high school, a high school associated with a residential program for teenage boys who had had minor difficulties with the law, and a school which was a part of a rehabilitation program for young people with physical handicaps and emotional problems. Classes were comparatively small at Warrendale and the Home for Crippled Children, ranging from two to fifteen students. But the students' varied problems demanded that individual attention be given them by interns who had some understanding of how to deal with their problems. Classes were larger at Taylor-Allderdice, usually ranging from 30-35 students, as is true in many public schools. Most of the students were at least mildly motivated to learn in school, and some were highly motivated. Teachers and interns could therefore devote much of their time and attention to continually improving curricula and examining teaching styles to maximize students' learning in science. The immediate concerns of the TTT science interns at the three sites therefore differed to some extent.

Interns at Warrendale Youth Development Center and Home for Crippled Children spent as much, if not more, time in meetings at their sites with site staff and interns and teachers in other disciplines concerning the problems of particular students than they did in TTT science seminars.

While the interns at Warrendale Youth Development Center and the Home for Crippled met frequently with teachers and interns teaching in other disciplines and school administrators concerning the problems of individual students, the interns at Taylor-Allderdice met most often with other science teachers. The fact that the concerns of the interns at the three sites were somewhat different, although all were teaching science, made it logical that the program contain site specific as well as area-specific (science) components. The site-specific component at the Home for Crippled Children was handled by the Home for Crippled Children staff which met daily, just before school began. Science teaching at the Home for Crippled Children was most specifically dealt with in a seminar led by J. Mrochek during the winter term. Supervisory sessions also concerned science teaching. The site-specific component at Warrendale Youth Development Center included staff and faculty in-service meetings devoted to problems facings all of the teachers, led by Warrendale Youth Development Center staff and specialists. Science teaching at Warrendale Youth Development Center was one of the major concerns of the weekly seminar held during the winter for Warrendale science interns. This was conducted by M. Muehlke, with the assistance of H. DeLuca, the cooperating science teacher. Supervisory sessions also dealt with science teaching. The site-specific component at Taylor-Allderdice was almost exclsuively concerned with science teaching in general and science teaching at Taylor-Allderdice.

The area-specific component of the science program was a weekly seminar for all science interns held at the university. The aim of these sessions was to examine issues in the teaching of science and attempt to formulate workable solutions.

B. See site descriptions for Home for Crippled Children, Warrendale Youth Development Center, and Taylor-Allderdice.

C. Classroom responsibility and Supervision.

Responsibility varied among the three TTT science sites. Supervision came from a number of sources.

The three MATs who wnent through the summer workshop obtained intern certificated which allowed them to legally handle classes on their own. Mrs. Henderson was a certified teacher when she entered the program. The two PYs, Dave Chesebrough and Tim Schmidt, and the certification student, Loretta Stana, had no type of certification at the outset. The classroom responsibilities are indicated by site in the paragraphs which follow.

At Oakdale, the two MATs--Harry Lewis and Tom Klasterka were on their own. Certain classes were taught by them as a team while others were conducted individually. Both J. Mrochek and M. Muehlke supervised, but this became one of the J. Mrochek's primary responsibilities. When Tom and Harry transferred to Warrendale Youth Development Center, they began to work with a cooperating teacher, Henry DeLuca. Classes were taught by various combinations of the three teachers.

At the Home Crippled Children, the PY and certification student each taught separately although they did some planning together. They were supervised by J. Mrochek and also visited frequently by the resident of Home for Crippled Children special education teachers.

At Taylor-Allderdice High School, each intern was supervised several times by J. Mrochek and M. Muehkle, but the bulk of the supervision was handled by the cooperating teachers. Cooperating teachers met in a weekly seminar in which supervision was on of the major concerns. Any problems they had with the interns could be brought up during these sessions. On of the results of this process was a mutually agreeable decision to counsel one PY, Tim Schmidt, out of the program before the end of the fall term. He returned to an ROTC program at the university.

E. Factors Contributing to the Success of Site-Based Training.

One of the primary factors which contributed to successful site-based training was interest. When administrator, cooperating teachers, and interns were all vitally interested in the success of the TTT endeavor, it was successful.

Another factor was number. From the point of view of the science program, the Warrendale and the Taylor-Allderdice sites were most successful. The numbers of intern and cooperating teachers at these sites made it seem very worth while for Pitt faculty to spend time with each group every week. At the Home for Crippled Children there were two interns during the fall term, but only one in the winter and spring. Although he did an excellent teaching job, the science program had less of an impact there.

V. Doctoral Students

A. Roles of Doctoral Students.

Three doctoral students were directly involved in the science TTT program--two in the TTT doctoral program and one in the Secondary Education (science) doctoral program. Hartman Pogue, who had participated as a first year doctoral intern in the 1971-72 science program instructed and supervised in the 1972-73 summer workshop which he had helped plan.

Joe Mrochek, a doctoral student in Secondary Education, also instructed and supervised during the summer. He continued to perform these functions at the sites for the duration of the program. His major responsibilities were supervision at the Home for Crippled Children and Warrendale Development Center, teaching a science methods class for the Home for Crippled Children PY, and evaluating progress of the interns.

Doris Litman has been a TTT doctoral intern durign the 1970-71 program and had returned to biology teaching at Taylor-Allderdice High School in the fall of 1972. She was instrumental in getting a science TTT program established at Taylor-Allderdice for the 1972-73 year. During the program she coordinated interms and cooperation teachers, supervised interns, and instructed in the weekly seminars.

B. Double practica.

Double paacticum models were not used in the 1972-73 science program.

C. Team efforts between doctoral student and faculty.

Two major parts of the program involved teaming between doctoral students and faculty. The first was the summer workshop which was planned and carried out by two doctoral students and one faculty member. The second was the Taylor-Allderdice seminars which were largely a team effort between one doctoral student and one faculty member. Supervisory sessions with interns often involved both a faculty member and doctoral student. All "staffings" were also joint efforts.

The TTT science program could not have proceeded without the doctoral students.

VI. Outcomes and Influences of the TTT Programs

Two major influences of the TTT program relate to the notions of site-based teacher training and increased practicum experience for pre-service teachers. Based on successes in the TTT program and also on those in the Department of Secondary Education have either moved toward establish more site experience for pre-service teachers or they are planning to do so. Although the student teaching period remains one term, the methods courses which precede this have begun to include practica as a part of their curricula. Pre-service teachers take a course in Foundations of Education, usually in their junior year of study. This course has for several years had practicum experiences for students. Three terms of some type of practicum are thus a part of the current programs leading toward certification and the bachelors degree in education in the Department of Secondary Education.

Establishing sites to which several student teachers in a discipline would be assigned and at which seminars for them and for them and for cooperating teachers would be offered by department faculty is now a goal in most of the Secondary Education areas. An example of this is the seminar for science student teachers held at Canevin High School during the fall term of 1973. Continuation of the successful Taylor-Allderdice TTT model will occur during the winter term (1974). Four student teachers will be assigned there to work with eight cooperating teachers. Eventually members of the Department of Secondary Education hope that student teachers from several disciplines will be assigned to the same site, and interdisciplinary seminar activities will occur--both for student teachers and resident teachers.

A third, more general, influence of the TTT programs has been a serious study of the existing teacher training programs in Secondary Education by members of that department. During the 1972-73 year a Curriculum Committee was created and given the task of critically examining the Master of Education programs. This group met weekly during the winter and spring and suggested changes which will put greater emphasis on teaching in urban schools. A two semester sequence is currently being developed. During the 1973-74 year, this committee has begun to examine the undergraduate program. Changes are anticipated here.

The TTT project has thus had a number of effects--whether direct or indirect--on the continuing teacher education programs in the Department of Secondary Education.

VII. Occupations of MATs and PYs in 1972-73 Science Program

Table 7 shows the occupations of the seven TTT science students in September of 1973. Six had teaching positions, and one returned to an ROTC program.

Table 7

OCCUPATIONS OF TTT SCIENCE MATs AND PYs IN SEPTEMBER, 1973

Name	Occupation
Harry Lewis	Chemistry Teacher McKeesport High School
Tom Klasterka	Earth & Planetary Science Teacher North Hills School District
Sara Henderson	Biology Teacher McNaugher Middle School Pittsburgh School District
Ed Henke	Physics Teacher Mon Valley Catholic High School
Loretta Stana	Chemistry Instructor Allegheny Community College Science Teacher Pittsburgh Tutoring School
Dave Chesebrough	Science, Math, Social Studies, Physical Education Teacher St. Ann's School
Tim Schmidt	Returned to ROTC program at Pitt

Appendix A.

Descriptions of Common Input and Human Development Course

COMMON INPUT

Common input form the Counselor Education Program into the Teacher Education Program, through Counselor Education's curriculum design, includes six of the following areas:

I. Self

II. Person Development

III. Psychic Processes (Learning: Affective and Cognitive Processes

IV. Groups

V. Roles (in the Classroom)

VI. Diagnosis, Feedback, and Evaluation.

An outline sketch of each of the curriculum design areas is stated briefly below.

I. Self

In this area attention is focused on the meaning of self and its implications in decisions such as the one to become a teacher. Underscored is the matter of self-identity: how it is manifested by the person and how it is communicated to others. The self; both in its intra-and inter-personal dimensions, has an impact which determines what does or does not occur in a social situation like a classroom. A difference may be seen in the classroom, for example, depending on whether one either elects voluntarily to become a teacher or is forced by, for example economic hardship, to become a teacher. The intentions and attitudes of the personal, subjective self, in this case, have a vital effect on the resultant social situation.

In order to help him become more aware of the intentional subject, which he experientially is, and the weight of sedimented pre-dispositions and pre-suppositions, the Teacher Educator has available to him people from Counselor Education who are specifically trained to bring out this level of the person's life. People in Counselor Education are constantly involved in one-to-one relationships in which awareness of lived experience makes possible discoveries of the behavioral and experiential aspects of one's self and its felt effect in situations. It is thus that the Teacher Educator benefits from the experiences and professional competencies of the Counselor Educator in the whole complex area of the Self.

II. Person Development

In this area attention is focused on the person in his human development. Erik Erikson's theory of "the Eight Ages of Man" provides one of the frames of reference. Human Development is seen as advancing through significant stages which have associated with them partial paterns of experience and behavior. The sequence of experiences and activities is modelled on the psychologists' understanding of human personality development itself.

Teacher Education students who elect this area are taken through three phases: 1) Introspection, 2) Inspection, and 3) Observation. Exercises appropriate to each developmental phase are selected to make specific features of that phase stand out. Activities such as "I remember" and "Childhood Experiences" taken from Malamud and Machover, which utilize techniques of recall and regression, enable the essence of the Introspective phase to be clarified. Other activities allow for transition from one phase to the next. For example, videotaped role-playing situations are carried out before the student enters the phase of Observation; and these situations are shared among fellow students before the individual is expected to observe an actual school situation.

Two principles are operative throughout. One involves the sharpening of the observational skill of description. The other, it is hoped, deals with the extinction of the tendency in persons (teachers) to make pejorative judgments of, for example, students. The whole emphasis in this area of human development is an effort to return from "second-hand knowledge" to the level of direct human experience. The thought that nothing happens by accident and that one phase of development encroaches upon subsequent phases informs the modus operandi of this area of Person Development and is absorbed into the teaching style and attitudes of Teacher Educators who opt into it.

III. Psychic Processes

In this area close attention is paid to the manifold character of learning, both its affective and cognitive processes. Differences between feeling and intellect are explored as well as their intertwining in the lived world. The realm of psychic processes is interrogated. The inquiry is conducted through reflective questions such as: What is imagination? What part do fantasy and reason play in judgment? Is imagination the organ of judgment? What is the interplay between affect and cognition? Can the learning process be understood through a temporal schema? Are memory and anticipation connected? What is perception? Does the suprasensible have its origins in the sensible? Besides these questions, issues of a practical nature affecting learning are thoroughly analysed. Teachers are unaware of how they shape learning experiences by rewarding some behaviors while punishing others. Skills in detecting these verbal and non-verbal communications are encouraged. Simulated as well as real situations in the field are the settings in which skills of observation develop. Adapting counseling methods and the training procedures to problems in teacher education, the core faculty and doctoral students conduct pre-practicum sessions in Allen E. Ivey's video method of "micro-counseling." Here, concepts of "attending behavior, " incorporating both verbal and non-verbal attentiveness to the student, are stressed. Reading materials, in the form of abstracts and articles relating to this method and others, are studied and discussed to determine how well Teacher Educators can conceptualize their observational data in terms of a frame of reference.

IV. Groups

In this area attention is given to the broad range of group experiences. The dynamics of groups is interrogated from both the experiential and theoretical level to uncover phenomena such as time factors, beginnings, termination, absence of members, projects, resistances, etc. Different kinds of group models--task, social, and others--are examined for the purpose of explicating group processes and rendering them more meaningful. Beginning sequentially with a concrete field situation--membership on a site committee--Teacher Educators are gradually taken through phases which eventually lead to their ability to conceptualize from their own group experiences. Role playing, games, observations of real and simulated situations are some of the methods used to facilitate the arrival of Teacher Educators to a point of conceptual understanding where they can appreciate their idiosyncratic behaviors and attitudes as members of a group. In addition, their own behavior in interacting with group members is investigated by reflection, and then by a comparison of their findings with the group studies of such researchers as W. R. Bion, R. D. Laing, Fritz Heider, Jay Haley, Eric Berne, Dorothy S. Whitaker and Morton A. Lieberman, to mention only a few. A chance to participate in a Bion group in order to comprehend concepts such as "fight- light" can be provided.

Grasping the methodological and theoretical differences between an Intra-personal and an Inter-personal group becomes one of the abilities, among many, which is sought. Finally, if Teacher Educators so elect, experiences in encounter and sensitivity groups are provided.

V. Roles

In this area, attention is centered on roles in the classroom. A prospectus of the kinds of social interaction which occur in classrooms is initiated. Both verbal and non-verbal levels of communication are studied, as well as their implications in the task a person in a specific role is expected to accomplish. An attempt to assess the effect of an innovative technique such as 'contracting' on goals and motivation is also begun. Ways of organizing learning experiences and managing their processes (i.e. grouping and teaming respectively) are undertaken in either real or staged situations, depending upon what is or is not available at field sites.

Finally, an inquiry into the implications for teachers and students of the connection between the organization and management of classrooms and the most pervasive task--learning--is seriously pursued.

VI. Diagnosis, Feedback, Evaluation

In this area attention is focused on the method of "staffing" and the processes of diagnosing and providing feedback to the students other than traditional feedback such as "grades" and evaluation of progress. Staffing by a clinical approach involves one-to-one meetings in which evaluation of a diagnostic nature is encouraged through the vehicle of give and take dialogue between teachers and students. The ability to be diagnostically evaluated while evaluating student performance is a courageous step (one that is hoped for) which any Teacher Educator can take. Through simulated as well as real activities, staffing as a method of feedback and evaluation is studied and learned so that once again teachers and students can work together on a human basis. And once again evaluation can become an activity that is constructive rather than judgmental in the sense that it now makes possible the mutual and collaborative designing of feasible learning experiences.

HUMAN DEVELOPMENT COURSE

Instructors: Richard Harden
Beverly Michael

This proposal is for a 10 week course in human development based on Erik Erikson's eight ages of man. The first and last weeks of the course would be devoted to pre and post-testing while the second thru ninth weeks would each be devoted to one of Erikson's eight ages beginning with the first stage, oral sensory or basic trust versus mistrust and progressing in chronological order thru the life cycle to the last stage, maturity or ego integrity versus despair.

The pre and post-testing would be designed to measure change in the affective and cognitive areas of the group of students but not to check individual students for grade or evaluation purposes. In fact, the present plan is not to identify individual scores by student name. The reason for this is to encourage maximum openness of participation in the course and maximum honesty of response in the pre and post-testing.

The course would be primarily experientally taught and the experiences designed with an eye to their affective impact, although they would implicitly carry a cognitive component. Additionally, there would be cognitive input thru the discussion and readings.

Appendix B

Examples of Devices Used in Taylor-Allderdice Seminars

TEACHER COMPETENCIES

	1	2	3
1. Establish and maintain purposeful activity in the classroom.			
2. Utilize performance objectives in instruction.			
3. Plan and use a variety of teaching strategies.			
4. Demonstrate knowledge of subject matter.			
5. Communicate subject matter to students at appropriate levels.			
6. Provide for individual differences among students.			
7. Plan and implement a variety of learning environments.			
8. Develop the ability to sequence instruction.			
9. Utilize teaching aids effectively.			
10. Make use of balanced student participation.			
11. Develop appropriate question-asking skills.			
12. Make use of student ideas and questions during discussion.			
13. Demonstrate flexibility in carrying out instruction.			
14. Diagnose learning difficulties and take remedial action.			
15. Design and administer appropriate curricular tests.			
16. Apply on-going evaluation as part of the learning process.			
17. Develop competencies in self-evaluation.			
18. Plan and use appropriate laboratory experience.			
19. Integrate laboratory experiences and classroom activities			

Teacher Competencies - Con't.

	1	2	3
20. Develop student willingness and ability to inquire.			

1. Superior achievement
2. Adequate achievement
3. Need additional work in this area

Excerpt from: Developing Teacher Competencies
James Weigand, editor, Prentice Hall Pub.

Developing Question-Asking Skills

I. Good questions:
  A) Provide for different levels of thinking
  B) Judged by its clarity, sensible word order
  C) Provide for reflective and critical thinking
  D) Relates meaningfully to experiences of person being questioned
  E) Facilitate development of desirable attitudes
  F) Develop and sustain interest
  G) Provide new ways of dealing with subject matter
  H) Given quality and purpose to evaluation

II. Effects of Question determined by:
  A) Level of thinking it stimulates
  B) Kind of response the question elicits because of the way it is worded

III. Types of questions
  A) Narrow questions require low level thinking, short factual answers; or other predictable responses
    1.) Examples:
      a) What is the largest city in Ohio?
      b) Why don't we use the word ain't today?
    2.) Test Samples:
      __a. What kind of animal is this?
      __b. How might life be different if England had won the Revolutionary War?
      __c. Does 45 consist of 2 numerals?
    3.) Practice: Write 2 narrow questions.
      a)
      b)
  B) Broad Questions--1) should permit a variety of acceptable responses,
    2) designed to be thought provoking, 3) cause person to hypothesize, predict, infer, involve expressions of opinion, judgment, feeling.
    4.) Lead to development of new insights, ideals, appreciations, desirable attitude, problem-solving
    5.) Move students away from guessing what answers teachers want
    6.) Examples of broad question:
      a) If you had chosen another field of interest, how might you have viewed this chapter?
      b) What is your opinion on the importance of questioning as a teacher competency?
    7.) Test Samples:
      __a. How do you define the word questioning?
      __b. What do you think are some of the things that might happen if you begun to teach a group of children a lesson without planning any questions?
      __c. Do you agree with the emphasis educators are placing on the individualization of instruction?

8.) Practice: Write two broad questions.
  a)
  b)

C) Cognitive-Memory Questions
  1.) Narrow questions limited to lowest level of thinking; reproduction of facts, definitions; or other remembered information.
  2.) Examples

a) Define:	What is poetry?
b) Name:	What is the subject of the sentence?
c) Yes or No:	Does the paragraph have a topic sentence?
d) Identify Observe:	What figure of speech is employed in the 3rd line?
e) Designate:	How many classes of words can you find?
f) Recall:	When was Shakespeare born?

  3.) Test Samples:
    __a. What did you observe in this demonstration?
    __b. What is meant by a natural resource?
    __c. Why is fishing important in New England?
  4.) Practice: Write 3 cognitive-memory questions.
    a)
    b)
    c)

D) Convergent questions
  1.) Narrow questions, too, but require person to put facts together and construct an answer.
  2.) There is usually one best in right answer.
  3.) Operations performed in answering a cognitive-memory question
    a) Explaining
    b) Stating relationships
    c) Associating and relating
    d) Comparing and contrasting
  4.) Examples:
    a) Why can't these two lines be made into a rectangle?
    b) Why do plants grow toward light?
    c) Why aren't languages all the same if they come from one source?
  5.) Test Samples
    __a. What are some of the ways you might use to stop a forest fire?
    __b. Why does the sun appear to move in the sky?
    __c. What is the name of the force that causes iron filings to stick to the magnet?
  6.) Practice: Write two convergent questions.
    a)
    b)

E) Divergent Questions: thought-provoking questions, open-ended.
  1.) Person organizes elements into new patterns
  2.) Person creates problem situations, synthesizes ideas, constructs meaningful solution.
  3.) Operation: Predicting, hypothesizing, inferring
  4.) Examples
    a) What predictions can you make about what is going to happen to the marbles?
    b) How might our country be different today if we never had slavery?
    c) What would the effect of this poem be if it were written in prose?

5.) Test samples use symbols C-M, C, D. or E.
- __a. How do you explain why the green ball did not float?
- __b. What are some ways a fish might live differently if the type of water in which he lives is changed?
- __c. In the numeral 33, what number does the first 3 name?
- __d. Suppose you were a caveman trying to write a message about your recent hunting trip using nothing but a picture, how would you do it?

F) Evaluative--person must judge, value, justify a choice or defend a position.

1.) Person must organize knowledge, formulate an opinion and take a self-selected position; must use evidence

2.) Examples:
- __a. What makes this picture better than that one?
- __b. Why do you say this is the best order for arranging these objects?

3.) Test samples: Identify using C-M, C, D, or E.
- __a. Is tuberculosis an infectious disease?
- __b. Which president do you think did the most for our country?
- __c. Why is a symphonic poem like a narrative?
- __d. In your opinion which folk singer is the best?

4.) Practice: Write 2 evaluative questions.

a)

b)

SCIENCE CLASSROOM ACTIVITY CHECKLIST

1. The purpose of this check list is to determine how you perceive the activities in your science classroom.
2. Mark all answers on the answer sheet, do not make marks on this booklet.
3. All statements should be answered on the answer sheet by blackening the space under the chosen response in pencil.
4. There should be only one mark for each statement.
5. Please do not write your name on this booklet or on the answer sheet.

If the statement describes what occurs in your classroom blacken the space under the letter T (TRUE) on the answer sheet; if it does not, blacken in the space under the letter F (FALSE).

SAMPLE QUESTION

0. Our science teacher usually takes class attendance.

Answer Sheet
T F
0. ■ | |

---

* This checklist has been adapted from an instrument developed by Addison Lee and Leonard Kochendorfer and is used with the permission of the authors.

SECTION A

1. Much of our class time is spent listening to our teacher tell us about science.

2. My teacher admits his mistakes most of the time.

3. If there is a discussion among students, the teacher usually tells us who is right.

4. My teacher often repeats almost exactly what our books say.

5. My teacher often asks us to explain the meaning of certain things in our books.

6. My teacher shows us that science has almost all of the answers to questions about nature.

7. My teacher usually talks to the whole class rather than groups of students or individuals.

8. Our teacher often tells us that we are doing good work.

9. Our teacher asks questions that cause us to think about things that we have learned in other science activities.

10. Our teacher often asks questions that cause us to think about the evidence that is behind statements that are made in our books.

SECTION B

11. My job is to take notes and memorize what the teacher tells us.

12. We students are often allowed time in class to talk among ourselves about ideas in science.

13. Much of our class time is spent answering out loud or in writing, questions that are written in our books or on study guides.

14. Classroom demonstrations are usually done by students rather than by the teacher.

15. We sometimes discuss the problems faced by scientists in the discovery of a scientific idea.

16. My teacher encourages students to disagree with him.

17. The questions we usually ask in class are to clear up what we get from the teacher or from our books.

18. We often talk about the kind of evidence scientist's use to make conclusions.

SECTION C

19. When reading our books, we are expected to know most of the details that are stated there.

20. Our teacher frequently gives us lists of words for which we write definitions.

21. When reading our books, we are expected to look for the main ideas and ways to investigate them.

22. Our teacher teaches us to raise questions in our minds as we read our books.

23. Our books and the teacher's notes are about the only sources of science knowledge that are discussed in class.

24. We sometimes read the original writings of scientists.

25. We often write reports from other books or from magazines.

SECTION D

26. Our tests include many questions based on things that we have learned from our laboratory activities.

27. Our tests often ask us to write out definitions of works.

28. Our tests often ask us to relate things that we have learned at different times.

29. Our tests often ask us to figure out answers to new problems.

30. Our tests often give us new data and ask us to draw conclusions from these data

31. Our tests often ask us to name or put labels on drawings.

SECTION E

32. My teacher usually tells us step-by-step what we are to do in the laboratory.

33. We spend some time before every laboratory activity determining the purpose of the experiment.

34. We often cannot finish our experiments because it takes so long to gather equipment and prepare other materials.

35. We often set up experiments to investigate questions that come up in class.

36. We usually do an experiment and gather data about a topic before we discuss the topic in class.

37. Most of the time we study the same topic we are experimenting with.

38. We usually know the answer to the laboratory problem that we are investigating before we begin the experiment.

SECTION F

39. Many of the experiments that are in our books are done by the teacher or other students while the class watches.

40. The data that I collect are often different from data that are collected by the other students.

41. Our teacher is often busy grading papers or doing some other personal work while we are performing experiments.

42. During an experiment we record our data at the time we make our Observations.

43. We are sometimes asked to design our own experiment to answer a question that puzzles us.

44. We often ask the teacher if we are doing the right thing in our experiments.

45. Instead of telling us the answers our teacher answers most of our questions about the experiments we are doing by asking us questions.

46. We spend less than one-half of our time in science doing experiments and other related activities.

47. We sometimes have the chance to try our own ways of doing the experiments.

SECTION G

48. We talk about what we have observed in each experiment within a day or two after we complete it.

49. After most experiments, we compare the data that we havc collected with the data of other individuals or groups.

50. Our teacher often grades our books or reports for neatness.

51. In class we are allowed to go beyond the regular activities and do some experimenting on our own.

52. We usually have a chance to study the conclusions that we have made from our experimental data.

53. The class is usually able to explain all the data that are collected in our laboratory activities.

54. My teacher often asks questions that cause us to think about the evidence we get from our experiments.

55. We sometimes take field trips to observe things we are studying in science.

Appendix C.

Guidelines for Developing Science Modules for the Warrendale Youth Development Center

Guidelines for Developing Science Modules for the Warrendale Youth Development Center

1. The experiences should be individual or small group.
2. Directed inquiry should be the goal.
3. The materials should be so constructed as to provide each student with the opportunity to be physically involved, in contrast to just being an observer.
4. The student should be encouraged to predict the outcome of the experience.
5. The modules should attempt to develop the student's ability to problem solve or abstract.
6. Students with reading problems should be provided with diagrams and illustrations as much as possible.
7. A post laboratory discussion should be encouraged in order to share experiences.

PITTSBURGH TTT PROJECT

SOCIAL STUDIES PROGRAM

S. HUGHES (Ed.)

SOCIAL STUDIES PROGRAM

Coordinator

Dr. Jeremiah Horgan (1971-72)

Dr. Sean Hughes (1972-73)

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Community Representatives

Arvis Kyser (1971-72)

Ray Edelman (1972-73)

Doctoral Fellows

Cathy DeForest (1971-72)

William Lindsay (1971-72)

John Mlinarich (1971-72)

Adolph Sanchez (1971-72)

Bernard Santana (1971-72)

Julian Zambanini (1971-72)

Sister Mary Gregory (1972-73)

Social Studies 1971-73

I. Program Organization

A. Recruitment

Recruitment for the TTT Social Studies Program was both internal to the University of Pittsburgh and external. Internally, students in the Social Sciences, especially history, political science, economics, were made aware of the TTT program through handouts and class visitations by TTT faculty and doctoral fellows. Externally TTT faculty contacted other universities and colleges to apprise them of the opportunities in the University of Pittsburgh TTT Social Studies program. A special effort was made to attract minority students.

Interested students made applications to the TTT program and to graduate study in the School of Education. Applicants were encouraged to attend scheduled information sessions on the nature of the Social Studies program.

Applicants who attended information sessions were then interviewed by program faculty. The decision was made that the applicant was acceptable or not acceptable to the program. For those who were acceptable, the next step was the training site interview. If the student were then acceptable to the training site he or she was then notified of final acceptance into the program.

B. Advisement.

Advisement was handled by the core faculty of the program. Additional advisement was available through the doctoral fellows attached to the core faculty and in the field sites.

C. Program Organized.

The program was organized in eight-week segments. The first eight-week segment was a period of diagnosis. Thereafter students were assigned to groups and faculty were assigned to instructional modes based on the Student Staffing Procedures. (See D. below).

D. Staffing Process and Procedures.

1. Staffing was an evaluative process linking the self-assessment of each student with the experience of teaching staff and the professional assessment of the core staff in a multilogue leading to a program individualized by the developmental needs of the students and the goals of the training program.

2. Elements were:

a. At the end of any eight-week segment of the program each student submitted to the program coordinator a description of his experience in each area of the program.

b. Staff members teaching in an area of the program submitted an evaluation of performance for each students.

c. The coordinator duplicated and distributed evaluation statements to Program Advisors who were members of the core faculty.

d. Advisors met with each advisee, gave advisee his copy of all evaluative statements and both advisor and advisee reviewed trainee progress in program thus far. Then advisor and advisee jointly discussed student needs and strategies for individualizing the student's program.

e. Advisors communicated results of advisee conferences during core faculty meetings which then allowed policy decisions on how to redesign program to better meet needs of individual students.

3. Procedures were:

a. Student Assessment form--submitted to program coordinator.

b. Staff evaluation form--submitted to program coordinator.

c. Recommendation form--made out by advisor and advisee during advisory conference. One copy to student through advisor; one copy retained by advisor to assure continuity from one staffing to the next, one copy to be retained by program coordinator.

During the school year 1971-72 these assessments were made at that time. However, toward the end of the year a final staffing took place as outlined below.

The first stage consisted of the collection of written evaluations from trainees and staff.

The second stage of staffing took place during the week of June 5-9. At that time each advisee had an advising conference with his program advisor covering the usual staffing elements. In addition students were to suggest a tentative Q.P.A. for themselves and to negotiate this with their advisor. Students also submitted to their advisor a draft of a personalized document incorporating all staffing information and composed as a culminating description of the trainees potential as a professional teacher. The advisor and student discussed and negotiated what final form this document was to take.

The final form of this document was to be included in the student's permanent record.

The third stage of the evaluation process consisted of the assignment Q.P.A.'s **(Q.P.D.) by the TTT core faculty.

Each advisor represented is advisees indicating the results of the final advisory conference and suggesting the tentative Q.P.A. The core faculty then accepted or modified the recommendation.

Students not satisfied with this evaluation could request a further evaluative staffing.

The staffing process was the same for 1972-73 with one exception. During this year students were assigned quality points for each course or seminar, or independent study taken. These were averaged to a Q.P.A. at the end of each eight week segment and cummulatively averaged at the end of the year. This was done to render the Q.P.A. more accountable.

Faculty from the school of Education, the college of Liberal Arts and from Carnegie-Mellon University participated in a core faculty relationship which intimately involved each in program and curriculum development, program management and advisement. Each faculty member was able to see and experience the range of elements and processes involved in a teacher training program. The discipline faculty especially

* NOTE (The program coordinator had two additional copies made of student assessment form and staff evaluation form. These were given to the advisor and the student.)

** Q.P.D. i.e., Quality Point Designation was used in place of Quality Point Average since the quality point was not, in fact, an arithemtic average of grade points.

had the opportunity to participate at all levels of teacher training. Furthermore incumbency on the core faculty involved a committment to getting into the field, a new experience for many faculty members.

Social Studies 1971-72

The program staff met weekly to monitor the content, structure, and implementation of the training program. Policy and decision making was the result of input from all core faculty members. Discussion of input and arriving of a consensus that best facilitated achieving the program's goals were an improtant part of the process.

In addition to the Core Faculty, a representative of the Reading and Language Arts Department of the School of Education was available on a one third work load basis. Additional faculty input was provided by other social science disciplines as needed--anthropology, economics, geography, political science, sociology and psychology

The six doctoral students participating in the Social Studies Program were: Cathy DeForest, William Lindsay, John Mlinarich, Adolph Sanchez, Bernard Santana, and Julian Zambanini. Their role in the program was to coordinate team effort at the sites, observe the classroom teaching of the MAT's and PY's and to assist them in the developing competency as teachers. On their observation, they made recommendations to advisors about student needs and the progress and development of each MAT and PY.

The integrated and interdisciplinary approach developed by the Core Faculty provided learning experiences in the four areas required by the Pennsylvania State Department of Education. These are the study and understanding of the basic structure, principles, and processes of the social sciences; teaching and learning methods; the study of the person in terms of development, learning, etc.; and the study of systems such as society, education, school, etc.

There were twenty-one PY's, and seventeen MAT's enrolled in the program. Training experiences took place at the University of Pittsburgh, Carnegie-Mellon University, and in five field sites: Braddock, Canevin, Home for Crippled Children, Oakdale Training School and Penn-Trafford.

SITE	SOCIAL STUDIES CLASSROOM	MAT's	PY's
Braddock	2	4	8
Canevin	2	4	-
Home for Crippled Children	1	-	2
Oakdale	1	2	4
Penn-Trafford	2	7	7

To insure that each MAT and PY was competent in the disciplines of the social sciences, the TTT Social Studies Program held on site seminars covering the basic structure, principles, and processes of the social sciences--the interaction of demographic and ideological features and their relation to the development of economic and social structures; social process, or the means by which societies maintain equilibrium and achieve goals; social change, or the means by which societies adjust to changing demographic technological or ideological realities, etc. Seminars were also held at Carnegie-Mellon University Social Studies Curriculum Devleopment Center to familiarize the students with the newest methods, curriculum materials, and media appropriate for social science instruction.

There was a continuing evaluation to discover and to strengthen areas of weakness in the individual's background. Other methods used to further ongoing process of professional growth and development included peer and group supervision and analysis, conferences with faculty on interaction analysis in the classroom, audio-video taping of classes accompanied by follow-up sessions.

The program also received input from the Counselor Education Department in the six following areas:

1. Self
2. Person Development
3. Psychic Development (learning; affective and Cognitive Processes)
4. Groups
5. Roles (in the classroom)
6. Diagnosis, Feedback, and Evaluation

The most vital training of the MAT's and PY's occurred at the field site. The field site program went beyond the traditional student teaching and internship programs in so far as the students were regarded as professional teachers who were responsible for the learning activities occurring in the classroom.

In addition to those already mentioned, a variety of innovations were found in the program. It was competency based rather than being perfunctorily introduced to them.

The MAT's and PY's played a significant role not only in the development of curriculum within a specified area, but also on a school wide basis. The student had the advantage of supervision and counseling from competent professional teachers, both on the local site and the university level. This allowed for a close and immediate correlation between theory and practice in the activities of the MAT's and PY's. It also permitted a flexibility and integration of concepts and practices that were not possible in the more traditional programs. The participant was responsible for developing a course of studies beneficial to him, rather than being held in check by rigid course requirements characteristic of other programs.

Social Studies Program 1972-73

In addition to the core faculty for 1972-73, additional faculty was available for electives and for components required by the Pennsylvania Department of Education e.g., seminars were offered in Reading and Language Arts (Jean Winsand). Special Education and Behavior Modification (Staff from the Home for Crippled Children), Political Science (Robert Sweeney, Carnegie-Mellon University). Economics (Robert Pratt, Business School of the University of Pittsburgh).

These areas in addition to those noted above constituted the curriculum of the Social Studies Program 1971-73.

During 1972-73 the field sites for the social studies program were: Canevin High School, Home for Crippled Children, Penn Circle School, Institutionalized Children's Program (Warrendale, Oakdale).

I.

Sample eight week schedule 1971-72 on campus.

Monday-Discipline Electives	
I Area Studies	4:30-6:00p.m.
1 - European Studies	
2 - Asian Studies	
3 - Latin Studies	
II Social Studies Concepts	6:00 - 7:30 p.m.
III Minority Studies	7:30 - 9:00 p.m.
Black, Chicano, Women	
Tuesday-Research Seminar for MATs	7:00 p.m.
Tuesday-	
Black Culture	4:30 - 6:00 p.m.
Theories of Learning	7:00 - 8:30 p.m.
Wednesday -	
Adolescence	4:30 - 6:00 p.m.
Group Theory	7:00 - 8:30 p.m.
Thursday - Methods	
Audio-visual	6:00 - 7:00 p.m.
Team Teaching	7:00 - 8:00 p.m.
Questioning	8:00 - 9:00 p.m.

Sample eight week schedule - cont.

Monday -

*Reading and Language Arts Winsand	4:00 - 6:00 p.m.
*Political Science Sweeney	6:30 - 8:30 p.m.

Wednesday

*Behavior Modification Vogel	4:00 - 5:30 p.m.
Poverty and Mental Illness Troup	6:00 - 7:30 p.m.
Chinese and Japanese Modernization Hua	
History of the Family Renner	7:30 - 9:00 p.m.
Uses of History Dillenburg	

* Required

Select at least one other seminar on Wednesday

It should be noted that students in the social studies program could also avail themselves of offerings in the other TTT programs and in the regular undergraduate and graduate programs of the University. The latter was usually done through independent study procedure to preclude registration mix-ups.

Liberal Arts and Education were brought together in schools and communities as members of TTT teams in five training sites in 1971-72 and four training sites in 1972-73. Sites were selected on the basis of need--the site's need for a chance to participate in a teacher training program and the program's need to have sites for training. The social studies program was interested in a variety of sites--Urban, Suburban, Public, Parochial and Institutional.

Each site had its own particular organizational pattern and specific projects that it developed. However, the basic unit within the site around which the total training program was developed tended to be essentially the same for all schools.

It consisted of classroom staffed by:

Department Head
TTT Doctoral Fellows
Two MAT Interns
Two PY Students
Preprofessionals
Discipline Faculty
School of Education Faculty

Community involvement was initiated in each training site through formation of a site committee. These committees had full responsibility for all aspects of the project in a site from recruitment, selection and placement to evaluation, development and expansion. For further information on sites see reports on individual sites.

Classroom responsibility was handled by an MAT intern supported by a Professional Year student. In many instances TTT students teamed with their peers and/or district teachers in the instructional process. Supervision was handled by doctoral fellows and core faculty. Each of the latter were committed to at least one day per week in the field for supervision and consultation.

SECTION FIVE

Site Case Reports

PITTSBURGH TTT PROJECT

BRADDOCK FIELD COMPONENT

T. MEADE (Ed.)

BRADDOCK

Superintendent

Henry Pappas (1972-73)

Maurice Silverstein (1971-72)

Henry Pappas (1970-71)

University Faculty Coordinator

Thomas Meade (1971-73)

Andrew Hughey and Thomas Meade (1970-71)

Discipline Faculty

Dr. Tom Dillenberg - Social Studies (1972-73)

Dr. Mike Helford - English (1972-73)

Dr. Dave Brumble - English (1971-72)

Dr. Herman Henning - Counselor Education (1971-72)

Dr. Pete Warsten - Social Studies (1971-72)

Second Year TTT Ph.D. Coordinator - Ann Holdren (1970-71)

Braddock School District

The Braddock school district (Braddock Area Schools) was the site used for the TTT Project at the University of Pittsburgh during the academic years of 1969-70, 1970-71, 1971-72. During that time individuals were trained at the under graduate, master's, and doctoral levels. Undergraduates and master's level students received actual training in the classroom, while the doctoral students training was mainly at the program level which was designed for the training of teacher trainer's (administration site and classroom supervision, site based course related to professional growth, and seminars in certain academic areas were their responsibilities).

The TTT project at the Braddock schools was subjected to some constraints because of:

1. the possibility of a merger which did eventually happen, and

2. racial incident in the community and the schools (fires in the building, student fights) and,

3. the closing at the schools numerous times by student and community persons, strikes by teachers, etc.

In spite of all of the above, the TTT students at Braddock had worthwhile experiences. However, (because of the reasons listed above), it was vertually impossible to establish any type of parity within the Braddock school/community system.

The management model at Braddock utilized the following structure:

Organizational Model

Braddock 1970-71

English Reading and Language Arts

Braddock 1971-72

English Social Studies

Scott 1971-72

English Social Systems

	1970-71			1971-72		
	Classroom	MAT's	PY's	Classroom	MAT's	PY's
English	4	5	10	2	4	6
Social Studies	-	-	--	2	4	6

Direct management of interns and professional year students (PY's) in matters concerning their developmental programs and their growth as teachers was handled by doctoral students in consultation with the TTT faculty and discipline coordinators. Certain classrooms were designated as TTT classrooms. The model was relatively effective, but could have been more effective by involving on a continued basis more at the school personnel at the buildings level, this lessening the TTT--regular desegregation.

Within the program MAT's, both from within the system and outside the system, were on an equal basis sharing with PY's and PPY's the responsibility for instruction.

The funds allocated to the site were used to sponsor curriculum development, student project, to provide additional learning resources not only for the TTT classrooms, but all other interested persons.

I. Organization

A. Management Model.

During the two years of TTT involvement English/Reading (1970-72) and Social Studies (1971-72) classroom were staffed by teams of MAT's and PY's. The site developed an interactive management model involving all levels and types of personnel in the conduct of training and educational services. The model is illustrated by the preceding diagram. The site coordinator was responsible for the management of the training activities.

B. Site Committee.

A loosely organized site committee consisted of a number of involved persons from a number of sectors of the community and educational program. The committee meet periodically to provide the forum for the educational issues, these meeting have included students, parents and other members of the community, school administrators, counselors, teachers, and other staff and personnel.

Site committee had the responsibility for providing a variety of inputs to TTT, for initiating program modifications and for suggesting acquiring consultants, in-service workshops, materials, etc.

C. In-School Organization.

A classroom team model was used to cover the classroom. MAT's, experienced and recruited from the district, were the 'teachers of record's'. PY's were paved with the MAT's to provide the MAT/PY team, wherever possible, PPY's (teacher aids in the district) were assigned to the TTT areas.

D. Site Training and Supervision.

Emphasis was placed upon the training of teachers (Ts) and the training of teacher trainers (TTs) by those who train teacher trainers (TTTs). All TTT teaching at Braddock Area were in the area of English and Communication Arts and Social Studies where four classrooms were staffed by a total of student teachers. Over staffing was deemed necessary because 1) the training model required individualized instruction for Braddock students, 2) teachers were released from classrooms for curriculum planning and supervision, 3) because teachers were encouraged to develop and attempt innovative approaches to teaching and, 4) so that TTT teachers could become involved with non-TTT Braddock Area staff. In this context supervision has been implemented as follows:

1. Across levels; i.e., Ts are supervised by TTs who are in turn supervised by TTTs (University faculty).

2. Sequentially; i.e., supervision at all levels consists of planning activities, direct observation of teaching, and follow-up feed back and evaluation. (Teams and individual MAT's/PY's).

During 1970-71, a second year TTT doctoral student interned in the English/Language Arts area.

Several specific courses were developed and taught in the site. Both the English and Social Studies programs taught specific content courses and methods courses in the site during the course of the project.

PITTSBURGH TTT PROJECT

CANEVIN HIGH SCHOOL FIELD COMPONENT

C. CONNORS (Ed.)

Diocese of Pittsburgh

CANEVIN HIGH SCHOOL

Superintendent - John Cicco

Headmaster

Canice Connors (1970-72)

Julian Zambanini (1972-73)

English Department Head - Adam Keltos

History Department Head - Sr. Diana Tauter

Community Representative - Mrs. Ann Harty

University of Pittsburgh Faculty Co-ordinator

William Faith (1970-71)

Canice Connors (1971-73)

Second Year TTT Co-ordinator - Robert Walsh (1970-71)

Discipline Faculty

Ernest Dorow (1971-73)

Rose Feldman (1971-72)

William Faith (1971-72)

Margaret Berry (1971-72)

Marilyn Papusek (1972-73)

William Pruskar (1972-73)

Doctoral Fellows

Margaret Mahler (1971-72)

Julian Zambanini (1971-72)

Sr. Luanne Kubish (1972-73)

Sr. Mary George (1972-73)

Canevin High School - Diocese of Pittsburgh

The community from which Canevin High School draws as a diocesan high school includes a wide range of socio-economic areas. The outlying areas of Canevin's district are largely rural, while surrounding the school at a closer range are several middle to upper-middle income, white suburban communities (Greentree, Rosslyn Farms, and Thornburg), as well as smaller, predominately white, low-middle income towns now joined to the city by suburbs (Carnegie, Crafton). The high school also draws from the West End section of the city of Pittsburgh which might best be characterized as an low-income, racially mixed section.

I. Organization

A. Administration and Management.

Father Canice Connors, O.F.M. Conv., was Canevin's headmaster-elect during the initial stages of planning the teacher training programs (TTT) at Canevin, in the spring of 1970. Father Canice is also a faculty member in the Counselor Education department at the University of Pittsburgh. It was this department at Pitt, through the person of the then Director of TTT, Dr. John Guthrie, which sponsored the first teacher training activity at Canevin. Father Canice, because of his affiliation with the University became the first Site Coordinator of the teacher training program at Canevin, with responsibility to oversee the entire scope of University and site personnel involvement. During his two-year administration, Father Canice appointed individuals to coordinate the separate spheres of the Universities' and Canevin's activities in the teacher training program. His successor, Father Julian, did not inherit the role of Site Coordinator because he held no official relation to the University; rather, this position was passed on to Shirley Arnold as Coordinator of Staff Development.

The following chart represents past delegation of authority for coordination of the teacher training program at Canevin including the creation of a new position, Coordinator of Staff Development.

TEACHER TRAINING COORDINATORS

1970 - 1971

Site Coordinator
(Pitt Counselor Education
Faculty Member)

Fr. Canice Connors

appointed

U. Pitt.
Faculty Coordinator
William Faith, Ph.D.

Second Year Teacher
Training Coordinator
Robert Walsh, Ph.D.

1971-- 1972

Site Coordinator

Fr. Canice Connors

appointed

In-Site Coordinator
Sr. Ann McGlinchey

Educational
Consultant
Robert Walsh, Ph.D.

Pre-Service Coord.
Sr. Luann Kubish

1972 - 1973

Coordinator of Staff Development

Shirley Arnold

A. Site Management.

A site program development and management team planned and conducted site programs during 1970-71. This was chaired by the site coordinator and was composed on a regular basis of the Secondary Education and English Department representatives for the University, five TTT doctoral fellows, and the English department head from Canevin. On occasion, the Principal or Coordinator of Curriculum from the school would attend. The site coordinator was responsible for all communication between the site and the University of Pittsburgh TTT project, and between the planning team and the administrative staff of the school.

During 1971-72 the program development and management team was chaired by the site administrator and was made up of the English, Social Studies, and Secondary Education representatives from Pitt, the Program Directors from Duquesne and Carlow (who represent the P.P.S. Satellite which functions in the building), the educational consultant, the teacher representative of the school to the English Program Committee, two TTT doctoral fellows (one of whom is curriculum coordinator of the school), and the English and Social Studies department heads. This group was responsible for planning and running the site program. The site administrator had the function of keeping the site coordinator (who was also the principal) in touch with all that the planning team does. The site coordinator was responsible for all communication between the site and the University of Pittsburgh TTT project executive committee. The English and Social Studies faculty members, the TTT doctoral fellows, and the faculty and community representatives to the English Program Committee were responsible for communication to the respective program committees.

By 1972-73 Canevin was a teacher training center for teachers from all Universities in the city. To coordinate and manage the influx of trainees, a new position was created, Coordinator of Staff Development. This person is responsible for all staff development activities at Canevin, both pre- and in-service. It is currently filled by someone trained, in part, through TTT.

B. Site Committee

The functional definition of "commity involvement" in the teacher training program at Canevin was the inclusion of all participant groups in some phase of decision making. In this context, the term "community" is used both in the generic sense, meaning the entire range of interest group at Canevin, and in the more specific sense of the parent population. One of the major innovations in community involvement at Canevin has been, in fact, the reorientation of the Canevin Parents' Club from a fund raising to a policy influencing organization.

The program goal of community involvement not only means empowering all active members of the Canevin scene, but also opening channels of communication and service with the feeder communities surrounding the school. The report refers to this broader civic "community", too, in outlining the Site Committee's Community Resource Program.

The Site Committee consisted of representatives from all components involved in the Canevin Site Training; i.e., parents, students, trainees, Canevin faculty and Administrators, as well as, University personnel. Each constituency elected and appointed its own representation. Over forty (40) individuals participated at the site committee during the three years of project involvement.

The Committee's Responsibilities included:

1. Monitoring and evaluating the program,

2. Determination of proposal priorities - Writing committee formulates priorities which are discussed and voted on by the committee at large, and

3. Decision-making power over continuation, modification and/or expansion of the project.

The Committee used the following processes:

1. Each segment - faculty, parents and students - is responsible for developing process to elect representatives to the committee. This was managed by the coordinator in 1970-71, and was handled by returning representations in 1971-73.

2. The committee determined how to gather data about priorities for following year's proposal. They interviewed at an open meeting all departments affected and made decisions based on these interviews.

3. The evaluation process which served as a basis for the decision about continuation and expansion of the program involved student and faculty questionnaires, a departmental statement of the English department and statements of Social Studies, Math, and Science department heads. (See attached summary).

C. Organization Model for Trainees.

Both the MAT candidates and PY trainees spent time at Canevin. The functional distinction between these two types of trainees is slight, but important. The MAT personnel are graduate students, already certified as teachers, who are working towards a Master of Arts in Teaching degree. The PY (Professional Year) students are undergraduates in their fourth year of college who are engaged in teaching practicum, leading to a Bachelor's degree with certification. Both MAT and PY's were assigned to teaching teams with resident Canevin faculty and are supervised through the developmental or clinical model. Both were committed to the training site everyday for an entire school year. The MAT, in addition, holds the position of part-time faculty member and shared the responsibilities of substitution with regular full-time faculty. The average part-time schedule for MAT's consists of four periods (3 classroom and 1 monitoring assignment) a day. The MAT trainee was not required to remain on site during unassigned periods, but may not make outside commitments which would impede his scheduling flexibility throughout the year.

Trainees at the Canevin site who were completing bachelor's degree requirements are categorized as "special program trainees" and "regular trainees". The "Special program trainees" are PY students from Pitt's TTT program and the Duquesne-Carlow PPS program. At Canevin, these trainees work in the math, English, social studies, science and foreign language departments.

"Regular trainees" are students from Pitt and Duquesne who come to the Canevin training site under the terms of the traditional student teacher-cooperating teacher program. This is a one-semester arrangement, as opposed to the year-long training models.

In addition, the teacher training program at Canevin provides practicum experience to several part-time college undergraduates who have not yet reached the professional year, but who are studying aspects of secondary education. These preprofessionals at Canevin were all previously members of the Canevin community, parents or adjunct staff, who returned to college and are planning second careers. Their involvement with the teacher training program in auxiliary roles enables them to accelerate their college classwork and receive credit for field experience at the same time. In the past three years, preprofessionals at Canevin have acted as remedial reading instructor, student activities counselors, executive secretary, and coordinator of small-group instruction in the English and social studies resource centers.

Finally, paraprofessionals, also known as community resource personnel, parents, and persons related to the Canevin community who have been invited to share their time and skills with students and staff are involved in some training. Paraprofessionals as a group are not involved in a college degree program at any level, although they are permitted to attend some seminars offered on site by University personnel.

II. Training

A. For MAT's and PY's.

In general, MAT's and PY's engaged in two kinds of supervised practica situation, team teaching and individual teaching. With respect to the former, they were assigned to teaching teams with regular Canevin faculty and do developed various roles on the team. With respect to the latter, MAT's and PY's would take over classes of a fellow regular faculty member. In both cases, doctoral fellows, regular faculty (University and Canevin) and the Coordinators were available as consultants. Day-to-day supervision was the responsibility of the TTT doctoral fellow.

The curricular sequence developed at Canevin is outlined below:

THE PROFESSIONAL YEAR TRAINING PROGRAM

I. First Six Weeks

On-campus courses:	Methods and drugs (1/2 day)
On site: 3 weeks	Observation Orientation Program Planning Seminars
Full commitment of off-campus training: 3 weeks	Community orientation Further observation (if needed) Group dynamics and management Individual and/or small group teaching Program Planning Seminars

II. Second Six Weeks

Further individual and/or small group teaching (if needed)

Continuation of group dynamics and management

Special methods

Developmental supervision

THE PROFESSIONAL YEAR TRAINING PROGRAM - Continued

II. Second Six Weeks

Program Planning seminars
Inter-institutional courses

III. Third Six Weeks

Co-teaching and/or full class teaching
Developmental supervision
Planning seminars
Inter-institutional courses
Introduction to elementary Schools
School, law, authority, organization
Developmental reading

IV. Fourth Six Weeks

Co-teaching and/or full class teaching
Developmental supervision

Three weeks
Evaluation/staffing (end of January)
Planning seminar
Developmental supervision
Inter-institutional courses

Three weeks
Elementary education program of observation and involvement
Planning seminar (monthly)
Remedial reading

V. Fifth Six weeks

Full class teaching
Developmental supervision
Inter-institutional courses
Continuation of elementary school program

V. Fifth Six Weeks - (Cont.)	Planning seminar
	Remedial reading (three weeks)
	Exceptional children (Special Ed.)
	Intro. to counseling techniques
	Evaluation and staffing (Mid-April)
VI. Final Ten Weeks	Continuation and/or completion of all of the above activities and seminars

B. In-Service

The unique nature of the Canevin site with its emphasis on total school involvement in training lead to extensive in-service for regular Canevin faculty, along with pre-service trainees. During 1972-73 a course in Clinical Supervision (materials appended), a workshop in Social Studies, Curriculum Development in English and a Reading Program were development projects conducted on site. Twenty regular Canevin faculty participated in the course. All members of the Social Studies and English Departments participated in the respective workshops.

III. Experiences

A. Role of University Personnel Site.

During the second year of teacher training at Canevin, (1971-72) the participating institutions, Duquesne, Carlow, and the University of Pittsburgh, reached agreement:

1. to allow a supervisor from any of the universities or from Canevin to supervise any intern or professional year teacher from any

institution; and

2. to give credit for any course taught at Canevin by a university faculty member from any of the three institutions.

Both of these indicate significant breakthroughs in inter-institutional cooperation by allowing all supervisory and resource personnel to organize into a functional, coordinated team without regard for institutional identities.

University personnel involved with teacher training at the Canevin site include supervisors, program coordinators, discipline coordinators and instructors. In addition to working with trainees (PY's, MAT's and doctoral fellows) University faculty assisted in staff development with Canevin faculty and, on occasion, provided direct service to students.

B. Role of Community Personnel.

Canevin utilizes community personnel on a variety of capacities including: resource persons, aids, tutors, etc.

C. Role of Doctoral Fellows.

The presence of doctoral interns at the training site makes possible the many innovative features of the Canevin teacher education model. Doctoral fellows and interns provide the expertise and manpower which allows regular consultation with teaching teams, and consultation with the prepservice and in-service personnel regarding curriculum, program development, teaching methods, and planning. Most particularly, the doctoral fellows facilitate use of the developmental model of supervision. The developmental, or clinical, form of supervision assumes that a supervisor cannot adequately judge a trainee's teaching ability by a few observations, or even by classroom observation alone. The model includes regular observation of the trainee's work in the classroom, as well as a series of conferences during which the supervisor and trainee share ideas of teaching and become acquainted with each other as "whole" person. The developmental model places considerable demands on the supervisor and requires training to be used properly, hence the importance of doctoral fellows in the teacher training program, who grant the necessary attention to individual trainees and who supervise each other's supervision.

D. In Sum;

The Canevin site has developed into a full pledge of Center for teacher training through the help of TTT and an EPDA/PPS grant to Duquesne/Carlow. A partial list of planned or serendipitous outcomes includes:

1. The multi-institutional, interdisciplinary teacher training model was expanded to include, in addition to social studies PY trainees, PY trainees in English and Language Arts, Mathematics and Foreign Language while altering the elementary involvement from one of training PY's to one which provides the secondary education PY exposure to and involvement in various elementary schools representing various economic, racial, and ethnic backgrounds.

2. The community educational center concept was introduced by a seminar program, "Focus on Learners and Learning", which was made available to all public and parochial schools in the Crafton-West End community for either pre-service or in-service training.

3. A Staff Development Committee was established.

4. The formation of a West End-Crafton advisory board growing out of and working in union with the Canevin High School site committee was begun.

5. A new role in the teacher training center. The Coordinator of Staff Development, was approved jointly by the teacher training institutions and the training site.

6. A program which invited parents into the school to meet regularly with the faculty of the center and to explore the possibility of becoming involved as paraprofessionals within the center and Canevin is in operation.

7. The development of a community educational center publication was begun.

8. Planning of a method of gathering data to determine the educational and service needs which the educational center may meet was begun.

Proposed course to be taught at Canevin High School January 8, 1972-April 16, 1973

Title:	SUPERVISION	(Repeated Spring term)

Time: Monday, 3:00 PM - 5:00 PM

Instructors: Fr. Julian, Shirley Arnold, additional resource people from University of Pittsburgh, Carlow College, Duquesne University

Participants: 10 in-service teachers at Canevin High School

Goal: TO DEVELOP SKILLS AND ATTITUDES WHICH FACILITATE LEARNING.

Objectives:

1. To increase self-awareness of person as teacher.
2. To provide decision-making experiences by encouraging participation in designing the course.
3. To create a sense of competency when dealing with:
   a. tools of supervision, i.e., Flanders Interaction Analysis, typescripting...
   b. team-teaching
   c. learning theory
   d. individualized instruction
4. To provide experiential learning through:
   a. observing and analyzing tapes of classroom teaching
   b. leading discussions of small groups; focus will be video-tapes
   c. supervision of a peer or student teacher
   d. individual projects

Recommended schedule follows. Topics will often be concurrent rather than separate and distinct.

Time	Topics
Weeks 1 and 2	Self-understanding
Weeks 3, 4, 5	Supervision "Tools" Team-teaching Learning Theory Individualized Instruction
Week 6	"Buffer" Week
Weeks 7, 8, 9	View Tapes of Teachers in Action Role-play Supervisor - Supervisee Relationship Micro-teaching
Weeks 10, 11	"Buffer" Weeks
Weeks 12, 13	Individual Project
Weeks 14, 15	Evaluation

CANEVIN COOPERATIVE TEACHER EDUCATION CENTER
PRE-SERVICE, IN-SERVICE, EDUCATIONAL CENTER OFFERINGS
WHICH WERE AVAILABLE TO PROFESSIONAL YEAR STUDENTS

PRE-SERVICE

Developmental supervision

Secondary methods

Problems in secondary schools

Video-taping

Program Planning seminars

Plus option of all other listings

INTER-INSTITUTIONAL

DUQUESNE-CARLOW-PITT-CANEVIN

Co-planning and teaching

Curriculum development

Child/Adolescent Development

Behavior

Social Systems

Special Methods

IN-SERVICE-CANEVIN

EDUCATIONAL CENTER
COMMUNITY

COUNSELOR EDUCATION (Seminars)

Intro. to Couns. Techniques

Group Dynamics

Management in the Classroom

Group Counseling

SCHOOL PSYCH. (6 Seminars)

Affective Learning

Humanizing Schools

READING AND LANGUAGE ARTS (Seminars)

Developmental

Remedial

Techniques for Teaching Reading in Secondary Schools

GENERAL EDUCATION (Seminars)

School Law

School Organization

SPECIAL EDUCATION (Seminars)

Understanding Exceptional Child

PITTSBURGH TTT PROJECT

HOME FOR CRIPPLED CHILDREN FIELD SITE

R. HARDEN (Ed.)

HOME FOR CRIPPLED CHILDREN

Director - Charles Bisdee (1971-73)

Associate Director - John Wilson (1971-73)

Director of Education - Roger Buchanan (1971-72)

Director of Education - William Bauer (1972-73)

Staff Member, Cooperating Residential Living - Eleanor Barovitch (1971-72)

Staff Member, Cooperating Residential Living - Richard Harden (1972-73)

Coordinator, Young Adult Program - Robert Pollock (1972-73)

University of Pittsburgh Faculty Coordinator - Robert Campbell (1971-73)

Discipline Faculty (1971-72)

David Brumble

Marge Muehlke

Steve Koziol

Susan Schiller

James Shoemaker

Discipline Faculty (1972-73)

Thomas Dillenberg

Mike Helfand

Marge Muehlke

Joseph Mrochek

Ogle Duff (Consultant)

Cooperating Teachers

Andrew Drasdak - (1972-73)

Carol Pollard - (1971-73)

Barbara Weigand - (1971-72)

Doctoral Fellows (1971-72)

Cathy De Forest

Richard Harden

Doctoral Fellows (1972-73)

Eleanor Barovitch

Barbara Daykon (Sept.-Dec.)

Doctoral Intern

Richard Harden - (1972-73)

Home for Crippled Children

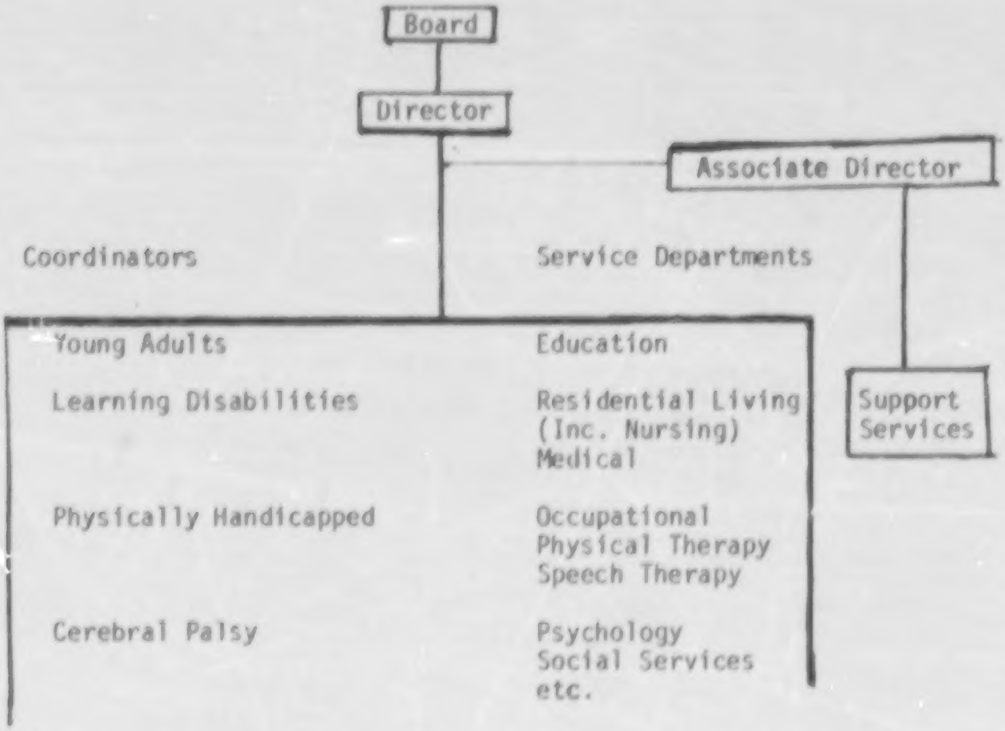
I. Description of Home and its Community

The Home for Crippled Children is the Regional Comprehensive Rehabilitation Center for Children and Young Adults in the core plan of the Hospital Council of Southwestern Pennsylvania, as well as a facility for children and young adults in the Community Mental Health program. The Home is a recognized educational facility for children and adolescents with learning disabilities in the Southwestern Pennsylvania area and beyond. Thus, in the broad sense, the Home's community includes all children and young adults served by the Home, those who might benefit from the Home's service but have not received it, the families of both of these groups and their own local communities who are in some way affected by the presence of the children and young adults with the afore-mentioned problems and the availability of services. While geographically this "community" of the Home is concentrated mainly in Southwestern Pennsylvania, it does spill over into adjoining states and northern, central, and eastern Pennsylvania.

II. Organization

The Home for Crippled Children is governed by a Board of Directors and managed by the Executive Director. The Director is responsible for the institution's programs. There is also an associate Director who oversees support services (bookkeeping, history, housekeeping, etc.)

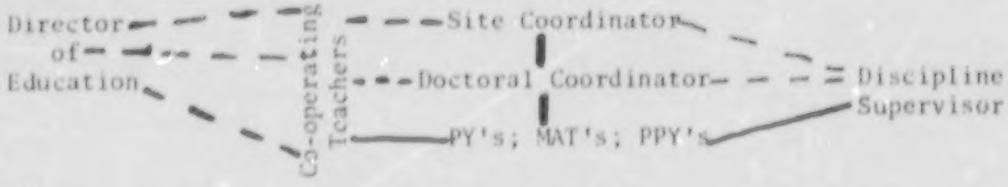
and assists the Director with overseeing the programs. In all areas he reports directly to the Director. There are four senior coordinators who wach have approximately 1/4 of the children and young adults of the Home as a caseload. The coordinator is the clients' program manager. He steers the client through his course of service at the Home and sees that the service departments provide a comprehensive rehabilitation program. Diagramatically the structure looks like this:



Note: Young Adult Coordinator has all clients over age fourteen regardless of disability.

A. Management Model.

The management model developed for TTT component is represented by the following diagram:



B. Site Committee.

The site committee concept was implemented in this field site. Specific details include:

1. Composition: PY's, PPY's, Doctoral, Site Coordinators, Co-ordinators, Cooperating Teacher, Director of Education, Site Young Adult Coordinator, Parent, Student, and other site staff representation.

2. Frequency of Meetings: Two times a semester.

3. Functions: Advising, overseeing, and sanctioning the program.

C. Organizational Model.

The organizational model for handling MAT's and PY's was institution wide; i.e., the program was contained within young adult part of education program within the rehabilitation center.

D. Site Budget.

TTT funds provided were generally adequate. However, the very limited scholarship monies created the necessity for some PY's and MAT's maintaining employment outside the program. This placed limits on the time and energy they could invest in the program which were not there the first year when scholarship funds were more adequate. Also, there were not funds provided for those PPY's to complete their programs who were not finished by the end of the 1972-73 TTT year. Some are still struggling to finish on their own. The preprofessional program was a powerful program but would have been more satisfactory completed if funds could have been provided for those students completion. Would have been helpful to have more resource money available for new materials.

E. Site Exchanges.

Math PY's in 1971-72 had experience observing and teaching at Westinghouse High School. Consultation time from various discipline faculties was available in regards to problem solving. The Home provided input and mini courses for a variety of MAT's, PY's and doctoral fellows around the topics of behavior modification, learning disabilities, contracting and prescriptive teaching, etc.

III. Training

A. Training Model.

Site Coordinator and other faculty supervised doctoral students and helped doctoral students to plan the implementation of the program model. The model itself grew out of interaction of all concerned (TTT doctoral students, cooperating teachers, preprofessionals, and student teachers). Doctoral students in turn supervised the cooperating teacher teachers, preprofessionals, and student teachers who implemented the program. Discipline faculty helped in the development of the curriculum and were part of the supervisory process, particularly in the content areas of the disciplines. The cooperating teachers also received input from the discipline faculty. Through multi-disciplinary staffings and more informal contacts various Home for Crippled Children professionals had an input into the training of various levels of students, and students themselves had an impact on each other through their constant interaction with each other within the program structure.

1. Doctoral coordinator managed workings of site program.

2. Discipline supervisors individually supervised and group supervised PY's, MAT's and PPY's, and

3. Cooperating teachers from site and staff insured continuity of education program for site students.

B. Curriculum included:

1. Both individualized and geared to small clusters of students. Homogeneous groupings and some heterogeneous were used. Learning contracts were utilized. Courses were provided in English, math, social studies, and science.

2. Overall responsibility for teaching was that of the master teacher working mutually with discipline supervisors. An overall schedule of available courses was developed with each discipline contributing based on the number of student teachers available and student need.

3. Each teacher or team of teachers taught courses. The student teacher (PY's and MAT's) taught half a day (morning or afternoon) each day of the week. They taught 2-3 courses in their half day. PPY's taught, one course per day but over a longer period of time (two years in most cases). The master teachers (cooperating teachers) taught courses as well.

IV. In-service

No specific in-service training for HCC staff was attempted. However, the Home was a key resource in providing training for MAT's and PY's from other programs/sites. Staff from the Home provided mini courses and inputs around the following types: behavior modification, learning disabilities, contract and prescriptive teaching, etc.

Much of the efforts of TTT was in the development of curriculum for the individualized learning (contract) system developed. Materials were developed in the areas of English, math, social studies, and science.

V. Experiences

A. Role of University Personnel included:

1. Supervision of student teachers by university discipline supervisors.

2. Overseeing and supporting program and people in it by site co coordinator, training and curriculum development resources.

3. Training and curriculum development.

B. Role of community personnel included participation on the Site Committee and Volunteer service.

C. Role of Doctoral Students included:

1. Doctoral coordinator (management on site).

2. Some discipline supervision.

3. Liason between University and site.

D. General Problems:

1. Relating TTT Project on site and site education department.

2. Student teachers adjusting to working with behavior modification system.

3. Demands on student teachers due to the nature of the complex interdisciplinary system of the site.

E. Outcomes beyond 1973.

1. Former TTT students on site staff

2. Site staff members who were PPYs received degrees and in a number of cases received promotions.

3. Increased recognition of young adult educational needs. Institution expanded facilities for young adult education to continue many of services to young adults that were formerly provided by the TTT program.

4. Site able to accept a broader range of young adult referals because of the broader educational services provided.

PITTSBURGH TTT PROJECT

MARS FIELD SITE

S. HUGHES (Ed.)

MARS AREA SCHOOL BOARD 1970-71

Dr. Albert Manerino - Superintendent

Site Committee

John Larson - High School Principal-Committee Chairman

Sean Hughes - University of Pittsburgh-Project Site Coordinator

Jerry Serafino - TTT Doctoral Student-Assistant Project Site Coordinator

Administrative Representatives

John Larson - High School Principal

Tom Tindall - Mid School Principal

Tom Hawkins - Curriculum of Instructions-Director

Teacher Representatives

Matilda Betres

Lois Latshaw

Sally Meier

Carole Phillips - Committee Secretary

University Representatives

Sean Hughes - School of Education

Christopher Rawson - College of Arts and Sciences (English)

Community Representatives

Mr. Harvey Potts

Mrs. Karl Schroedel

Mr. Dale Sklemar

Student Representatives

Karl Heineman

Beverly Kaufman

Howard Utz

Doctoral Students (Supervisors) - TTT Students

Daniel Pumphrey - California

Louis Orr - California

Russel Strange - South Carolina

Allen Zito - New York

MAT Interns (English)

Dan Charny (experienced teacher from school district)

Kay Keister

Marilyn Fleischer

Kevin O'Brien

Professional Year Interns

Joan Hilboky

Sharon Hunckele

Norma Lace

Linda Lee

Montgomery Weble

Kathy Neville

Site Committee 1971-72

Adminstrative Representatives

*John Larson - High School Principal-Committee Chairman-(re-elected)

Tom Tindall - High School Principal

Teacher Representatives

Lois Latshaw - Chairman English Department High School

Sally Meier - Middle School

Carole Phillips - High School Committee Secretary

Alvin Murchisom - Science High School

Joseph Mrochek - Chairman Science Department High School

University Representatives

Sean Hughes - School of Education Project Site Coordinator

Jerry Serafino - TTT Doctoral Student-Assistant Project Site Coordinator

Christopher Rawson - College of Arts and Science (English)

Marjorie Muehlke - Science Education

Community Representatives

Mrs. Karl Schroedel

Mr. Dale Sklemar

Student Representatives

Renee Fisher

Ruth Rollings

Roy Stang

Larry Truber

---

* Mr. Larson resigned for personal reasons at mid-year. Mr. Serafino was re-elected Chairman.

Doctoral Students (Supervisors) - TTT Students

John Novak (Science Education-Pittsburgh)

Hartman Pogue (Science Education-Rochester New York)

Jimmie Taff (English Education - California)

MAT Interns

Jill Baskind (English-Middle School)

Janet Burke (English-Middle School)

Ronald Dietz (Science-Middle School)

Barbara Elkind (English-Middle School)

John Fong (Science-High School)

Carolyn Heil (English-High School)

John Johnson (Science-High School)

Professional Year Interns

Joan Craig (English-Middle School)

Roy Englebrecht (Science-High School)

Carole Fritsche (English-Middle School)

Edward Henke (Science-High School)

John Krall (English-High Schcol)

Preprofessionals

Betty Furka

Carolyn Jarrett

Mars Site 1970-72

The Mars Area School District is located approximately 25 miles north of Pittsburgh and serves and area apparently in transition from a rural to a suburban community (exurban). About 35% of the student population is placed in four year colleges and universities upon graduation while another 40% goes on to two year colleges or technical schools.

The general population of the school district is about 10,000 people. The socio-economic profile runs the gambit from lower working class to upper middle. The population is white. During the two year spin of TTT there was but one black family in the school district.

During the school years 1970-71 and 1971-72, the TTT project was involved in classrooms and extra classroom activities in both the senior high school and the middle school. The latter was divided between an old elementary building (sixth and seventh grades) and the senior high school (eighth grade) during 1970-71. The new middle school building was completed in late summer of 1971 and opened for classes in September, 1971. The latter school building was designed on the open concept--three large pods with auxiliary service areas between and in the center.

The basic decision-making body for the Mars area TTT project was the site committee composed of, as noted above, teachers, administrators, and students from the district, School of Education and College of liberal Arts faculty, and key representatives form the community. The committee operated on a parity basis with its primary objective to improve the quality of education for students through improving the quality of the teacher training program.

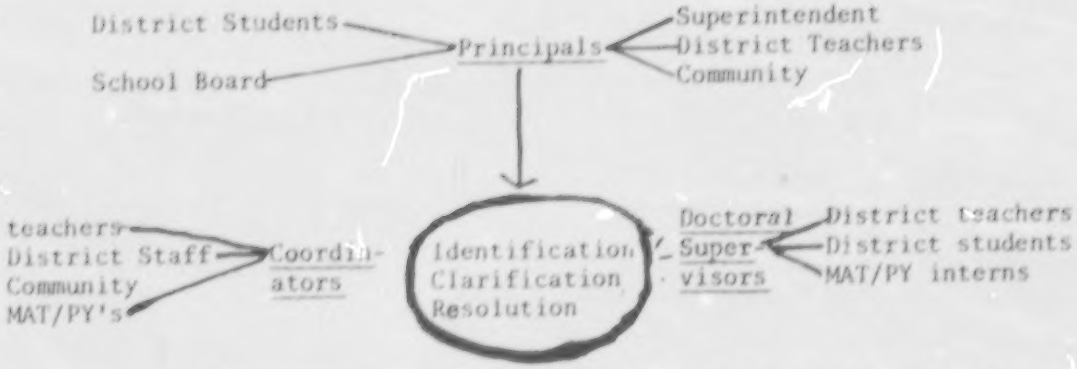
The Mars site committee held regular open meetings at not more than six week intervals throughout the academic year. The committee decided policy, developed, approved and evaluated programs within the Mars TTT program. It also monitored ongoing programs through reports from each TTT classroom or team. The committee further negotiated with the School Board on any issue involving TTT which necessitated board action.

Besides the open, formal meetings, the site committee members were in constant informal contact with the TTT project and with other members.

While policy for the Mars TTT project was decided by the site committee the day-to-day management of the site was handled by the Project Site Coordinator and Assistant Project Site Coordinator. The latter was appointed for the school year 1971-72 by the Mars Area School District. He spent four days per week on site and fulfilled the daily management requirements. In this capacity he was responsible to the Project Coordinator representing the University of Pittsburgh. Both Coordinators were in constant contact, formally and informally, with the Superintendent, the high school principal, and the middle school principal. Central also was the involvement of the Curriculum Director for the middle school, the Reading Supervision for the district, the Director of elementary schools, and the Chairpersons in the senior high school.

During 1971-72 a weekly meeting of the high school, principal, middle school principal, two coordinators and doctoral supervisors was held. The purpose of these meetings was to review what was happening, to scotch rumors and to try and identify potential problems. The meetings proved effective in keeping lines of communication open and clear of distortions. Many problems and potential problems were resolved or obviated.

District Staff



During both years at Mars the classroom model for staffing with MATs/PYs was used. During 1970-71 English classrooms in the senior high school and middle school were staffed by TTT personnel. It should be noted that the middle school classroom was not strictly a classroom but rather an English and Language Arts position for the eighth grade team. The staffing was as follows for 1970-71:

Senior High Classroom

3 sections of 12th grade English

2 sections of 9th grade English

2 MAT interns	3 day/week
2 Professional Year students	3 day/week
1 Doctoral student supervisor	1 day/week

1 English department Chairperson form the district, for counseling and (part time) advisement

Emphases---teacher training, team planning, team teaching and curriculum development.

Middle School Classroom

6 Section of eighth grade English

2 MAT interns	3 day/week
2 Professional Year students	3 day/week
1 Doctoral student supervisor	1 day/week

1 Curriculum Supervisor from district for consulting and advisement (Part time)

Emphases---teacher training, team planning, team teaching and interest grouping

A. Project Learn Classroom.

Project learn was special program designed to meet the needs of "problem learners" from the eighth (middle school) and ninth (high school) grades in the Mars district. It was based on the assumption that each child, if given the opportunity to learn or not to learn, will choose to learn.

1 Resident district teacher	5 day/week
2 Professional Year students	3 day/week
1 Doctoral student Supervisor	1 day/week

1 Counselor from district

During this school year team A (1 MAT and 1 PY) taught Monday, Tuesday, Wednesday; team B (1 MAT and 1 PY) taught Wednesday, Thrusday, Friday. On Wednesday both teams overlapped and made possible coordinated curriculum planning group supervision, group seminars on site, etc. This arrangement was changed for 1971-72 in the high school at the request of the School District. It was felt that continuity with students was more important than any benefit derived from the three-day pattern. In its place a morning and afternoon schedule 5 day/week was adopted i.e., team A five days per week from 8:00 a.m. to noon, team B five days per week from 11:00 a.m. to 3:00 p.m. However, as it turned out, most of the MATs and PYs came early and stayed late.

NB: Project learn was not negotiated as a TTT classroom. However, TTT did agree to help with staffing when requested by the district.

The staffing for 1971-72 was as follows:

Classrooms in high school	
Tenth grade English	
2 MAT interns	5 day/week - a.m./p.m.
2 Professional Year students	5 day/week - a.m./p.m.
1 Doctoral student supervisor	1 ½ day/week
1 English department chairperson for consulting and advisement	(part time)
Physics	
2 MAT interns	5 day/week - a.m./p.m.
1 Professional Year student	5 day/week - a.m./p.m.
1 Doctoral student supervisor	1 day/week

1 Science teacher from Mars staff for consulting and advisement	(part time)

Emphases---Curriculum Development, individual tutoring interest building, inquiring method, team planning.

Classroom in High School

Expressive Arts (6th, 7th, 8th grades)

2 MAT interns	3 day/week
2 Professional Year student	3 day/week
1 Doctoral Student Supervisor	1 ½ day/week

Emphases---Teachers training team planning, intern/grouping, speech, drama, poetry..."expressive-arts", term teaching with other district teachers on grade teams.

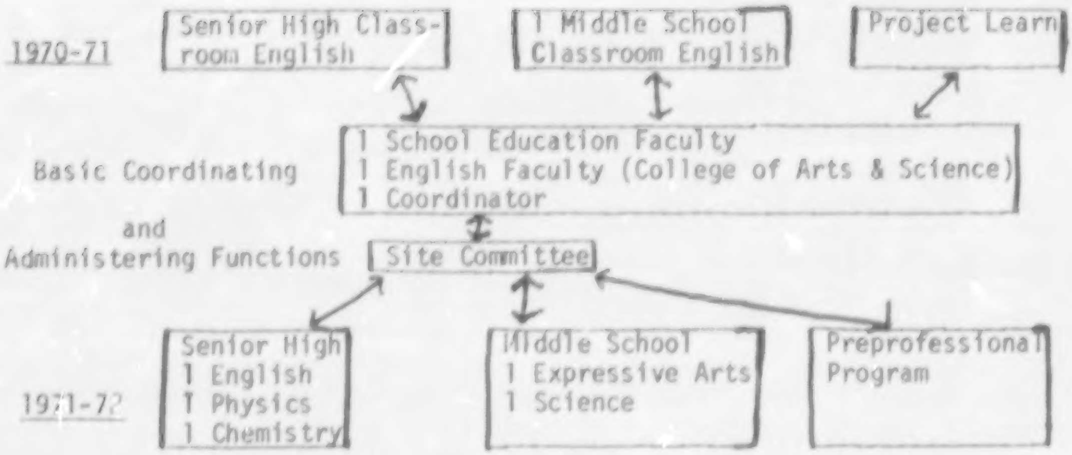
Science

eighth grade

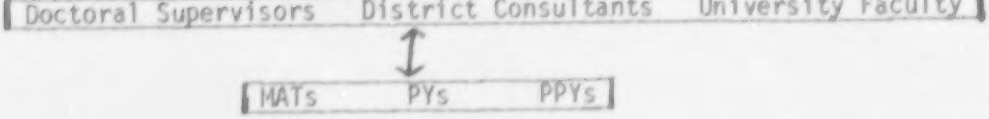
2 MAT interns	5 day/week
1 Professional Year student	5 day/week
1 Doctoral student Supervisor	1 day/week

Emphases---Teacher training, team planning, individualized instruction, teacher-student contacts, inters/grouping, team teaching with other teachers in eighth grade teams, Ecology unit.

The participating preprofessionals were assigned to the English/Expressive Arts teams--one in high school the other in the middle school.


1970-71
Senior High Classroom English
1 Middle School Classroom English
Project Learn
Basic Coordinating and Administering Functions
1 School Education Faculty
1 English Faculty (College of Arts & Science)
1 Coordinator
Site Committee
1971-72
Senior High
1 English
1 Physics
1 Chemistry
Middle School
1 Expressive Arts
1 Science
Preprofessional Program

Organizational structure for 1971-72.



B. Training and Supervision.

Training from the doctoral level through the preprofessional took place in cooperation and teamed with the Mars Area Administration and staff.

In essence the training paralleled the supervisory model and process.

The T_1 (MAT intern who had a B.A. practice teaching the summer before internship) and the T_2 (PY student still an undergraduated) were supervised by TT (a doctoral student). The TT in turn was supervised by TTT (University faculty). The TT supervised the T_1 and T_2. His supervision, was in turn supervised by the TTT. (Both discipline faculty and staff of Education faculty) District staff were also invo involved at this level. In effect the supervision of MATs and PYs was the responsibility of a team composed of TTT fellows, university fellows, university faculty and district curriculum supervisors.

At each level both trainee and supervisor were involved in group and individula sessions, direct observation of teachers supervisory activities and post observation feedback and evaluation. An ever-increasing use was made of peer supervision in an attempt to develop autonomous teachers or trainers capable of independent judgment, discretion and of self-evaluation.

TTT (University Faculty & District Curriculum Supervisors)

Supervised

TT (Doctoral Students - TTT Doctoral Fellows)

Supervising

$T_1 + T_2$ (MATs + PYs) + PPYs

Specific content and methods courses taught on site:

- Instructional and Behavioral Objectives
- Science Fiction Literature
- Black Literature
- The Modern Novel
- General Methods for teaching Secondary School-small and large
- Special Methods for teaching English
- Special Methods for teaching Science
- Piaget and the Inquiry Method
- Micro teaching English + Science
- Counseling for teachers
- Supervision for beginning teachers

During 1970-71 one doctoral student worked with the high school English department and was instrumental in developing a mini course curriculum for the 12th grade. The following year this was extended downward to encompass the 11th grade. Another doctoral student, in cooperation with Mars personnel, designed a paraprofessional training program which became operational (partially) in the 1971-72 academic year. A third doctoral student worked with the Middle School Industrial Arts team to move them from an impasse of long duration (more than one academic year). The team finally moved toward planning and preparing for entry into the new Middle School building. A fourth doctoral student was assigned to Project Learn when it began to falter. He provided the necessary expertise to ensure the project's continuation.

During the academic year 1971-72, a doctoral student with two MATs and two PYs developed the Expressive Arts Curriculum for the middle school. An Ecology unit was also developed in the middle school by the Science and English TTT personnel. One of the doctoral students was hired by the district to work with the middle school principal. In the science area the doctoral students, MATs and PYs revamped and revitalized the high school science curriculum. Two doctoral students together with their faculty, curriculum consultants and district staff began to develop a K--12th grade curriculum, based on the inquiry method. This was requested by the school district in an attempt to upgrade the curriculum and provide better articulation between the three levels of education in the district: elementary, middle and senior high. The latter project was the major emphasis for 1971-72.

C. In-service

In-service activities were carried out in both years of the project's duration at Mars. During teacher orientation days at the beginning of the school year the TTT orientation was welded to the Mars staff orientation to provide a smoother transition of the project into the district, during the school year. University credit courses were offered at Mars open to all district faculty and staff free of charge. Courses were offered in English, English Education; the Social System of the school administration. Independent study credit was also offered on a similar basis in the area of Science and Science Education. The courses were developed and offered at the request of site personnel. Instruction was a mixture of lecture and discussion--mostly the latter. There were never less than 12 participants in any of the courses. The main thrust and emphasis was the contemporary secondary school with special attention paid to the Mars experience. Each course was a three credit course. Courses offered on site (totally and informally) for TTT MATs and PYs were open to site personnel, though not for credit except by special arrangements. In conjunction with the development of an inquiry based elementary science curriculum, two in-service days for all elementary teachers and science teachers from other grades were designed and carried out by TTT University Science faculty. This was a major accomplishment since there had been for some time a major split between the elementary schools and the middle and senior high school.

The role of University personnel in the site was two-fold:
1) to supervise and train the doctoral students, MATs and PYs and
2) to be available as consultants to district personnel when requested.

The role of community personnel in the site was to participate in the monitoring and advising functions of the site committee, to provide community input to the University faculty, doctoral students, MATs and PYs both formally and informally.

The role of the doctoral students was to supervise and train the MATs and PYs and provide expert assistance to the school district and school district personnel when requested. (This was very much requested).

The main issue that developed from the project's presence was the overwhelming nature and influence (at least previewed) of project personnel in the district. In the second year and with the addition of counselor education interns, the number of "outsiders" went beyond thirty-five (35). This number, in a relatively small district, tended at times to overshadow regular faculty. There was also the problem of responsibility and access to faculty. Were the MATs-PYs and doctoral students solely accountable to the University, the school district or both and if both then less so to the school district? Some of the MATs and PYs had difficulty distinguishing between the relatively freer atmosphere and climate of the University and the more conservative environment of the school district. This did lead to problems dealing with "Catcher in the Rye" and "Who's Afraid of Virginia Wolf", used by MATs in the high school. The latter brought about serious confrontation with the board and though probably not a valid nor even indeed the true reason did contribute to the project's termination in June 1972.

PITTSBURGH TTT PROJECT

OAKDALE FIELD COMPONENT

R. DILTS (Ed.)

INSTITUTIONALIZED CHILDRENS PROGRAMS

Oakdale

Superintendent - Dr. Charles Bair

Assistant Superintendent - Dr. James Jordan

Director, Institutionalized Childrens Programs - James Currie

Executive Director - Charles Bugbee

Director of Services - Andrew Kistler

Director of Casework - Richard Freeland

Coordinator of Instruction - Jeff Sherwood

Coordinator of Pupil Services - Robert Wilson

Coordinator of Counseling Services - Thomas Gleinn

Coordinator of Learning Center - Jean Stuehringer

English Department Head - James Brumble

Head Teacher - Mario Perfetto

University of Pittsburgh Faculty Coordinators (1970-72)

Thomas Anderson

Beverly Harden

Robert Dilts (1972-73)*

Second Year TTT Coordinators (1970-71)

Bob Wilson

Tom Gleinn

Discipline Faculty

Steven Koziol

Nancy Donnelly

Marge Muehlke

Linda Pritchard

Alice Troup

Michael Morris

Doctoral Fellows

Gordon Pike

James Currie

Bernie Santana

Oakdale

I. Background

The Oakdale Youth Development Center was a TTT training site for two academic years (1970-72). It began a third year, but was phased out in November, 1972 because the institution's Board of Directors decided to suspend operations. Because the institution closed, the educational program, contracted with the Allegheny County Institutionalized Children's Program, was terminated.

As background data, it is important to know that the Youth Development Center was a residential treatment facility for adjudicated boys between the ages of 8 and 18. The majority of students came from urban settings in Pennsylvania and neighboring states. The student population consisted of Black, Puerto Rican, Spanish, Mexican, and White students. The students almost totally were educationally and economically disadvantaged.

II. Management

The Oakdale site represented a unique training experience for teacher trainees in that many of the students with whom they had contact were adjudicated because of inability to cope with "mainline" educational agencies (public and parochial) and/or develop socially in their home situations.

Management of the teacher trainees' programs was an integrated three sectional effort as diagrammed in figure 1.

The functional delineation of the model involved:

Oakdale as a residential center (YDC)
Oakdale as a school (Institutionalized Children's Program)
Oakdale as a field site (University-TTT)

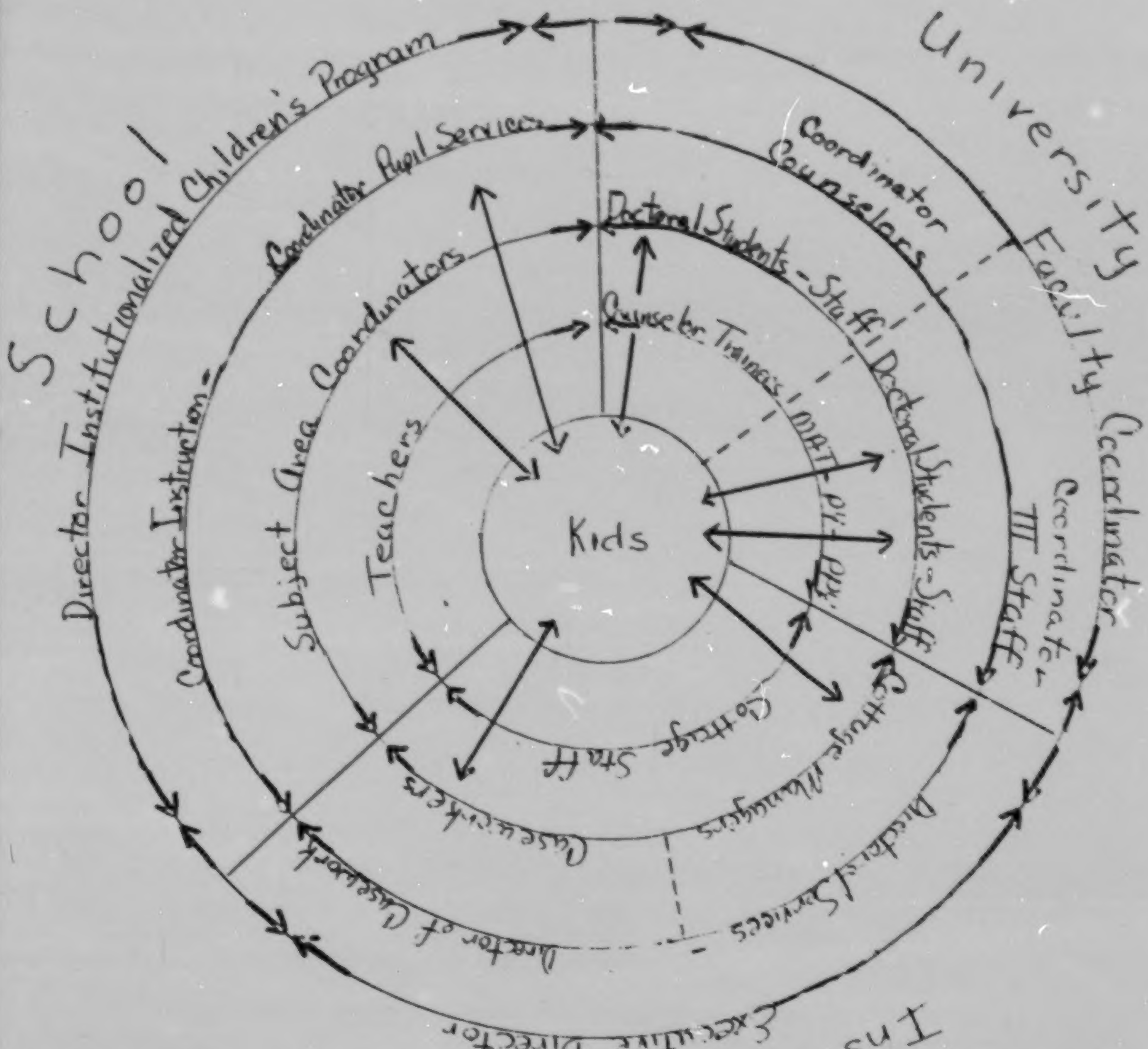
Direct responsibility for managing the field training experiences of TTT personnel was shared by the Coordinator of Pupil Services and the TTT Faculty Coordinator and his assistant, the coordinator of TTT staff.

As is evident from the management model, the focal point of involvement was around the students and their development and interaction with the three areas. Trainees had functional relationships with both the residential program staff and the instructional staff.

III. Site Committee

The composition of the Oakdale site committee varied from the usual context in that the institution represented an isolated system and was not structurally integrated into the surrounding community. Functionally there were relationships, e.g., services provided for work experiences for students. These were negotiated individually with community persons and not with the community as a social entity. Hence, the site committee was composed of representation of the three segments and the core of the management model: the institution, the school, and the university, plus one additional element, a representative of the "originating community" of the Oakdale YDC community in the person of a probation officer.

SITE MANAGEMENT MODEL - Figure 1


School
University
Institution
Director Institutionalized Children's Program
Coordinator Pupil Services
Coordinator Instruction -
Subject Area Coordinators
Teachers
Kids
Counselor Trainees / MAT - PP - PPS
Doctoral Students - Staff / Doctoral Students - Staff
Coordinator Counselors
Faculty Coordinator
Coordinator - III Staff
Cottage Staff
Cottage Managers
Caseworkers
Director of Casework
Residential Services
Executive Director

Institution	School	University	Community
Five Students	Five Students	Project Coord.	Probation officer
Dir. of Casework	Coord. of Instruction	Counselor Ed. Coord.	
Dir. of Services	Coord. of Pupil Service		
Executive Director	Counselor		
Caseworker	Learning Center Coord.		
Cottage Manager	Teacher		
Cottage Supervisor	Dir. of Institutionalized Children Program		

The functions and responsibilities of the Site Committee were to:

1. Discuss, plan and evaluate innovative activities.

2. Designate and employ consulting or resource personnel.

3. Contact other Oakdale staff and students and community-at-large for public relations and other input or information gathering.

4. Finance innovative activities directly relevant to training programs.

Meetings of the site committee were held monthly (September-June). In addition, critical issues were handled through emergency meetings of the entire committee or a sub-group of critical personnel.

IV. Training

A. Organizational Model.

The site component of the TTT Training Model for students assigned to Oakdale basically evolved around the classroom. Teams of students: undergraduate (professional year) and master's degree (MAT's) worked under the supervision of doctoral students training as teacher trainers and University faculty, in staffing classrooms designated as TTT classrooms. Figure 2 illustrates the disciplines, classrooms and TTT personnel involved at the various levels.

Figure 2 - TTT Oakdale Program

Discipline	Classrooms	Personnel					
		YR	PPY	PY	MAT	Ph.D.	Univ. Faculty
English	2	70-71		6	4	5	3
		71-72	1	5	2	1	1
		72-73	(1)*	1	3		1
Social Studies	2	71-72	1	3	2	1	1
		72-73	(1)*	2	3		1
Science	1	71-72			2	1	1
		72-73			2		1

*Pre-professional year students. Parentheses indicate same individual as year preceding. Pre-professional year students were para-professional staff from the site who were offered the opportunity to become certificated teachers through TTT Project involvement.

* * *

Total Trained:

PPY--------2

PY--------17

MAT-------18

Ph.D.------8

In addition to their responsibilities to specific classrooms, trainees in 1971-72 and 1972-73 were responsible for staffing a Learning Center, an innovative program growing out of the TTT Project in 1970-71. The Learning Center was developed to meet the following needs of Oakdale students:

1. wide range of abilities
2. differences in intelligence
3. varied emotional needs
4. lack of school orientation

V. Training

A. Pre-service.

As indicated above, field training focused around classroom instruction (maximum number of students per class--10) and the Learning Center. Learning in all areas was individualized, using team teaching, co-teaching and individual teaching models. The emphasis in the experiential phase of TTT was on peer learning with facilitative supervision provided by doctoral students and faculty.

B. Curricula.

The curricula for which the TTT Project was responsible were within the bounds of English and Communication Arts; Social Sciences; and Natural Sciences. With small classes and contractual independent study being the realities of the institution, the curriculum in each academic area was very flexible and both student needs--and student interest-oriented. Examples of course offerings (mostly mini-courses lasting between 4-8 weeks)

ENGLISH AND COMMUNICATION ARTS

Popular Mass Media

Composition In Sports

Letter Writing

Individual Novels of Adolescent Interest or Identification

Individualized Grammar Study

Science Fiction

Drama and Acting

IPI Reading

Reading Clinic

NATURAL SCIENCES

Biology: An Introduction

Chemistry: An Overview

Physics: A First Look

Weather and Climate

Earth History from Rocks & Fossils

The Changing Earth

Extinction of Man

SOCIAL STUDIES

American History

Black Studies

Current Issues

General Psychology

Vietnam

Geography

The general focus of the curricula was developmental and awareness--based: providing students with opportunities to develop communication skills and to deal with issues that were real in their lives, giving them a sense of worth in relating academic concerns to their own growth and development as human beings.

The Learning Center provided additional contact with students and was two-dimensional in focus. First it provided an opportunity for students to engage topics such as: art forms, model construction, macrame, leather craft, and Spanish. Second, students and faculty (TTT and regularly employed faculty) were able to engage each other in setting other than academic learning.

C. Instruction.

Various models of teaching were encouraged to:

1. develop self-confidence in planning and teaching;
2. differentiate dynamics of team and individual teaching;
3. differentiate dynamics of tutorial and small group instruction.

Trainees were responsible for teaching individually, in pairs, in teams, and co-teaching with regular staff as means of experiencing as many modes of teaching as possible and learning from each other in developing their own personal teaching styles.

D. Supervision

Faculty and doctoral students were responsible by academic areas for supervising the growth of professional trainees. Various dimensions of supervision were provided leading toward skill development and competency in self-supervision. Supervision of planning and team teaching in addition to clinical supervision of actual teaching sessions were incorporated into the supervision model. In several instances, trainees were receiving supervision form peers and doctoral students who respectively were being supervised by doctoral students and faculty.

The role of the supervisor was initially to help teachers identify their strengths and weaknesses; furthermore it was to facilitate the teacher's ability to analyze his own teaching and increase his self-awareness. Supervision requires that a balance be kept in terms of helping the teacher find himself yet not create a situation that fosters dependency. The supervisor must establish a warm, supportive relationship that aids in developing the personal and professional self in an independent, autonomous manner. The sequence of the supervision process was continued at all levels, i.e., doctoral students engaged in this model with trainees, faculty engaged with the doctoral students in a similar process and finally trainees utilized this awareness and understanding with Oakdale students. The teachers, through their experiences in supervision, were able to transfer the learning to their students and thus create a similar learning environment which focused on the developmental aspects of learning.

PITTSBURGH TTT PROJECT

PENN CIRCLE FIELD SITE

R. DILTS (Ed.)

PENN CIRCLE COMMUNITY HIGH SCHOOL

Director - David Zarembka

English Program - Marc Simon
(TTT Graduate, 1972)

Social Studies Program - Richard Stanczak
(TTT Graduate, 1972)

Penn Circle Community High School

Personnel

I. Site Descirption

Penn Circle Community High School (opening in January, 1973) provides an alternative high school experinece for students who are disenchanted with and/or truant from Peabody High School in the East Liberty section of Pittsburgh. School facilities will be housed in the East Liberty YMCA with adjunct facilities provided by agencies and businesses in East Liberty and Oakland in which students have community-related experiences.

II. Goals

Goals for Penn Circle Community High School students are to:

1. improve their reading speed and levels of comprehension through individualized instruction;
2. improve basic mathematical skills through individualized instruction;
3. identify basic concepts in English, math, science, and social sciences to fulfil the state high school requirements;
    a) Students and teachers will evaluate progress by written evaluations at three weeks intervals.
    b) Students will develop a sense of responsibility and accountability for their own learning by formulating and completing contracts.

4. develop a positive attitude towards learning by choosing areas of personal interest;

5. define himself in positive success-oriented terms in learning situations by utilizing processes of self-realization;

6. solve problems and handle learning and interpretational situations by independently, thus becoming a slef-sufficient **learner**;

7. help other students by contributing their skills, abilities, and energies both in a classroom and school community;

8. actively paricipate in the on-going processes of the school;

9. interact in the community through a variety of experiences so that the student will become familiar with as many career options as possible;

10. increase cross-cultural relationships with people from diverse racial ethnic, class, and vocational backgrounds; and,

(From Proposal for Penn Circle Community High School)

III. Curriculum

The curriculum consists of learning experiences in:

A. Core Areas.

The core areas of English and language arts; social studies; mathematics; sciences; health and physical education. Electives, e.g., language, art, commercial training, may be available depending upon student request and resources. (Core areas meet state education requirements).

B. Community Courses.

Community courses offering students the possibility of working and interacting with local agencies and business, e.g., photography lab at Chatham College; Day Care Center; social studies department at Carnegie-Mellon; real estate; and auto repair. Actual time involved in such interests depends upon the student and the specific type of activity. The intent is for a variety of placements for each student to extend his career/vocational interests.

C. Tutorial.

Tutorial provides an arena for personal and interpersonal growth (one teacher, one teaching intern, and ten students meeting every morning for an hour and a half; possible involvement of counselors) Possible experiences are:

1. planning learning contracts in core and community areas
2. planning tutorial group projects,
3. discussing issues and problems, and
4. self development: increasing self-awareness and self-acceptance.

D. Exploratory Learning Environment.

Exploratory Learning Environment is a self-selected learning experiences with teachers acting as resource persons. Goal is student acceptance of responsibility for one's own learning and development of self-evaluative capabilities.

IV. Curriculum Implementation.

(The following are appropriate curriculum descriptions available from TTT Program Coordinators).

A. Mini-Courses.

Contracts within curricular areas are designed for three-week periods. Contracts are negotiated with faculty in prescribed areas but may be formulated during tutorial sessions. Seminars will average ten students per faculty member.

B. Independent Study.

Independent study is negotiable between faculty and students.

C. Carnegie Unit Requirements.

(Seventeen required by Pennsylvania Department of Education).

4 English
2 Mathematics
2 Science
3 Social Studies
6 Electives

plus 1 Health and 2 Physical Education

With the flexible schedule at Penn Circle, 1/10 of a Carnegie Unit may be earned each three weeks in each area through:

50 minute meetins -- 15 meetings
80 minute meetins -- 9 meetings
120 minute meetings -- 6 meetings

V. Staff

A. School Board.

The School Board is composed of the director; one teacher; one student from each tutorial; one student elected at large; ten additional adults (parents, educators, community, ministries and diocese, YMCA).

B. Administration/Faculty.

1. Director, Community Relations Coordinator, School Coordinator, and three certified teachers (two of whom were in TTT in 1971-72: Marc Simon--English, Rich Stanczak--Social Studies).

2. Volunteers supplement the work of the paid staff (i.e., paid at poverty level subsistance). Among those listed as volunteers will be interns (TTT) and counselors (Masters and Doctoral).

C. Interns/Professional Year Students.

1. Assigned to team with the certified teacher in the appropriate subject area and assist with a tutorial experience.

2. Minimum time involvement of three hours/day plus the All School Meeting Time on Wednesday afternoons. Additional time involvement negotiable between the intern and teacher or staff.

3. Commitment of those joining project continues until Penn Circle adjourns for summer.

D. Counselors.

1. Counselors at the Master's level--must agree to participate in at least three tutorial sessions per week (allowing time for morning seminars on campus) and two full days of participation with students (including All School Meeting on Wednesday afternoons). Opportunities exist for counseling, groups and consulting.

2. At doctoral level, involvement is negotiable with site co-ordinator (Counselor Education) and Project Director. Opportunities certainly exist for counseling, consulting, and program development.

VI. University Involvement

A. Site Coordinator--Bob Dilts.

1. liaison with school board, administration, and faculty.

2. liaison with TTT programs and Counselor Education

3. Counselor Education supervision.

B. TTT Supervision.

1. English - Rose Feldman
2. Social Studies - Alice Troup
3. Science - Marge Muehlke

VII. Personnel

A. Professional Year Students.

1. Gregory Smith - Social Studies
2. Paula Vassallo - English
3. Martha Cannamacher - Science

B. MAT Students

1. Karne Albig - Social Studies
2. Michael Waldholz - English

PITTSBURGH TTT PROJECT

PENN-TRAFFORD FIELD SITE

R. DILTS (Ed.)

PENN-TRAFFORD

Superintendent - Richard Robinson (1970-72)

Principal, Penn High - John Mochnick (1970-72)

Principal, Trafford - Reynold Peduzzi (1970-72)

English Department Heads - 1970-71

George Kenyon-Penn High
-Trafford High

English Department Heads - 1971-72

Frances Black-Penn High
George Kenyon-Trafford High

Mathematics Department Head - Jack Reilly (1971-72)

Science Department Head - James Ramsey (1971-72)

Social Studies Department Heads - 1971-72

Ted Kukich-Penn High
Raymond Edelman-Trafford High

Community Representative - Helen Bailey (1971-72)

Site Committee Chairman - Mrs. Donald Hewitt (1971-72)

University of Pittsburgh Faculty Coordinators (1971-72)

Robert G. Dilts-Penn High
Jeremiah Horgan-Trafford

Doctoral Fellows (1971-72)

Alice Giglio
William R. Lindsay
Daniel Nasman
Thomas J. Seitzinger

Penn-Trafford School District

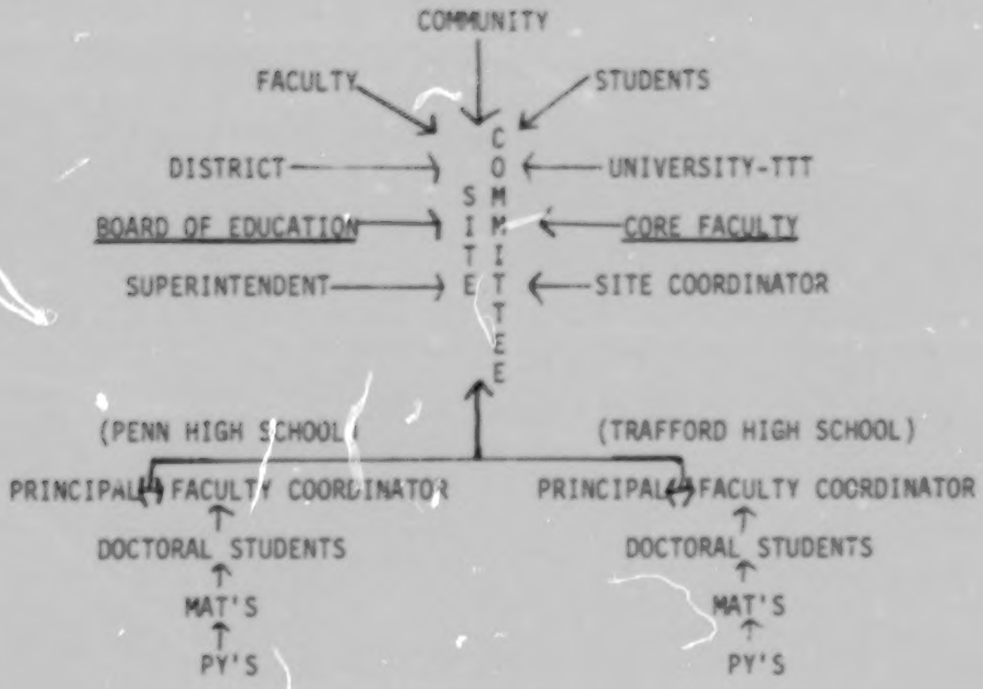
The Penn-Trafford School District was used as a field site for the TTT Project at the University of Pittsburgh during the 1970-72 academic years. During that time individuals were trained at the undergraduate, master's, and doctoral levels. Undergraduate and master's level students were training as classroom teachers. Doctoral students (at a program level designed for training teacher trainers) served as field supervisors, taught site-based courses related to professional growth, and seminars in certain academic areas.

A local education agency involved in the TTT Project is subject to some constraints because of:

1. the relationship with the University, and
2. involvement in a federally financed program.

The agency, if responsible, takes on a new dimension: that of a training agency and, as such, becomes involved in the management of multiple systems, i.e., coordinating the needs and objectives of both the agency and the University; parity through site committees composed of community, students, trainees, agency staff and University staff; and funding matters.

The management model at Penn-Trafford incorporated the following structure:



Direct management of interns and professional year students (PY's) in matters concerning their developmental programs and their growth as teachers was handled by doctoral students in consultation with the TTT faculty coordinators. In matters relating to the interns functioning as "teachers" within the social structure of the school, the principal was responsible for management. Generally, any major concern of the principal about a trainee's performance at the site was first conveyed to the faculty coordinator and doctoral students responsible for the trainee to deal with informally. The model was relatively effective but could have been more effective by involving on a continual basis departmental chairpersons at the building level.

Unfortunately, there was not a chairperson designated for each department at each school. Chairpersons were involved in a three-day workshop conducted for TTT personnel prior to the opening of school in August, 1971 and met with TTT to discuss the curriculum development activities that were being done by the Penn-Trafford faculty during the 1971-72 academic year in preparation for the opening of a new school building the following year.

A second and more immediate reason for not involving department chairpersons was that certain classrooms were designated as TTT classrooms. With the exception of the Social Studies program at Trafford High School which was experimenting with a mini-course structure involving all faculty of that department and all TTT personnel assigned to that department, and certain faculty participating as MAT's, the MAT's and PY's had little formal contact with the Penn-Trafford faculty. The point to be made is that many of the suspicions and fears that were generated from the faculty about TTT could have been avoided or at least lessened had the site coordinator been more cognizant of the ramifications of not initiating such contacts.

I. The Penn-Trafford Faculty

A. Organizational Model.

In effort to provide in-service education for faculty at Penn-Trafford, the model adopted permitted TTT to be involved only in classrooms in which Penn-Trafford faculty desired to participate in the project as graduate teaching interns. During the height of TTT involvement at Penn-Trafford, the model called for four classrooms (English, mathematics, science, and social studies) in each of the high schools. After discussing with each academic department at each school the TTT program and the possibility for them to earn a master's degree, nine teachers applied. Two were rejected because of duplications within a single department. The final model was:

PENN HIGH SCHOOL

ENGLISH	MATHEMATICS	SCIENCE	SOCIAL STUDIES
Penn Teacher	Penn Teacher	Penn Teacher	Penn Teacher
1 MAT	1 MAT	1 MAT	1 MAT
4 PY's*	4 PY's	1 PY	4 PY's

*PY's - professional year students: undergraduate or graduate students without stipends

TRAFFORD HIGH SCHOOL

ENGLISH	SCIENCE	SOCIAL STUDIES
Trafford Teacher	Trafford Teacher	Trafford Teacher
1 MAT	1 MAT	2 MAT's
3 PY's	2 PY's	5 Py's

The Penn-Trafford teachers serving as interns received their full salaries minus $2,500.00 stipend which was awarded them as interns. Within the program the MAT's both from within the system and outside the system were on an equal basis sharing with PY's the responsibility for instruction.

In addition to the one classroom in social studies at Trafford, an intern was assigned to work with the chairman of the department because he was released half-time to teach in the Social Studies Program of TTT in which he interacted with all students pursuing certification in social studies.

B. Site Committee.

The Penn-Trafford site committee was composed of: six parents, one of whom served as chairwoman; six students (three from each school); two principals; two teachers appointed by the Penn-Trafford Education Association; one counselor (with alternate); one TTT doctoral student; superintendent of schools; and the TTT site coordinator. The responsibilities of the committee were as follows:

1. providing feedback to the program from each of the components;

2. interpreting the TTT project to organization and groups within the community;

3. facilitating educational chare by participating in studies of curricular projects and providing input to those responsible for change; and

4. evaluating the impact of the TTT project on the district's educational program.

The processes in which the site committee engaged included monthly meetings to provide feedback and a continuing evaluation, visitations to TTT classrooms to observe the operational phase of TTT and to gather data about conditions reported to them by parents, and subcommittee studies of potential changes in the curriculum. Trainee representatives from each of the four areas presented their goals and procedures to the site committee as part of the monthly meetings.

C. Budget.

The funds allocated to the site committee were used to sponsor curriculum innovation studies, to provide seed money for student projects, to provide additional learning resources for TTT classrooms, one to underwrite a survey of community resources--both human and physical--to supplement the curriculum.

Funds remaining in the site committee budget at the conclusion of the project was funneled to the Principal and Student Council of the new high school to provide for an annual community-cultural program.

II. Training

A. The Training Model.

Each classroom designated as a TTT classroom was staffed by a team of interns and professional year students, as indicated in the previous section. In each of these classrooms except the Trafford social studies program, the team divided the responsibility for instruction so that each intern and one-to-three professional year students were primarily responsible for one-half of the assigned schedule. This was not a rigid structure and at times the total team might be involved in instruction. At other times only one or two individuals would be teaching. Two of the objectives for training: teaming of teachers and grouping of students were thereby implemented.

The Social Studies trainees at Trafford technically were assigned to a classroom but participated with the entire department in a mini-course curriculum experiment. Interns and professional year students teamed with other trainee and/or regular staff to teach a variety of elective courses lasting six, twelve, or eighteen weeks each.

The curriculum for which TTT personnel were responsible included:

1. English - instruction at both junior and senior high school levels; development of English curriculum relevant for terminal education students;

2. Mathematics - instruction in junior high school Mathematics and Algebra I; teaching Project PLAN Arithmetic curriculum; revising Project PLAN TLU's to reflect local educational objectives;

3. Science - instruction in biology, Earth and Space Science, and Physics (only laboratory facilities in schools were portable demonstration tables); and

4. Social Studies - instruction in mini-courses in Anthropology, Scoiology, American and European History, Political Science and Paychology (Trafford); regular classroom instruction (thematic approach) in American History (Pennsylvania).

Because a Penn-Trafford teacher was part of each TTT team the trainees were well aware of the constraints and policies of the District as related to curriculum and instruction.

Supportive staff included doctoral students and University faculty from the following departments: Counselor Education; Secondary Education cation--English, Mathematics, Science; English, Mathematics and Social Studies.

Supervision was handled by staff and doctoral students. Mostly the supervision was of clinical and resource orientation with different supportive staff providing different orientation. Peer supervision also was quite effective. In two serious cases of trainees not being able to effectively teach, peers tried to help them develop and eventually helped them accept the realization that teaching was not an appropriate career choice.

The focus of seminars conducted at the site was on teachers' self-awareness, the dynamics of the classroom, and application of methodology for each academic area. Some of these seminars involved trainees from all of the academic areas at both schools with the intent of increasing identification with a total TTT Program and sharing experiences across academic areas. Trainees were not particularly receptive to those attempts, at least to the extent that merits out-weighed the inconveniences of traveling to a common facility with enough room for a meeting and time consumption.

III. Services to District

A. In-service.

First of all, the model for the Penn-Trafford TTT Project provided for the involvement of Penn-Trafford Teachers. Therefore, ten teachers were involved in the project over a two-year period and received master's degrees.

A content (Literature) seminar was offered for teachers in English lasting fifteen weeks with eight teachers in attendance.

A doctoral student met informally with three teachers for a ten-week duration and made observations in their classrooms. The theme of the session was "Instructional Modes and Inter-disciplinary Concepts."

A fourth in-service opportunity was provided all social studies teachers at Trafford High School in the form of a two-day workshop held at the University dealing with Inquiry, Task Groups, Current

Developments in Social Studies Education, Adolescence and Learning Styles. This seminar was conducted by an inter-disciplinary team at the University and was attended by twelve individuals.

Additional attempts at in-service were not productive. Because of the new high school opening, curriculum development was to be occurring in each department. One meeting was held at which University personnel and Chairpersons of academic departments met to discuss curriculum innovation and development. The offer was made by the University personnel to serve as resources to the faculty as they developed their various curricula. With the exception of the Mathematics department, no one involved with TTT was invited to participate in curriculum development. The resident intern in Mathematics developed the junior high school Mathematics courses of study.

IV. In Retrospect

Because of its social and political demography, Penn-Trafford was a fairly good field site for training teachers for suburban employment. The district had been involved in some innovation activities, e.g., Heritage, Project PLAN, family-based counseling. In this respect the District provided a rich field for training. However, certain conditions did interfere with the training and are discussed for the benefit of "experience ".

The relationships among the faculty, administration and board of education were not particularly positive, and in fact interfered with an effective educational program in the District. This was by no means universal, but involved a hard core of faculty and board members, with righteous indignation pre-dominant among administrators. Because the members of the School Board each represented a geographical entity and had historically served as boards of two distinct districts there was considerable cleavage within the Board and concurrently among the faculties.

The site committee was supportive but not very influential as far as affecting the educational program of the District. It served two main functions: provided a forum for communication among various elements of TTT and for airing concerns; and also provided support (financial and spiritual) for innovative curriculum study.

It is hypothetical whether or not the reception of TTT by the District would have been considerably better had the University and the district administration conducted workshops to orient additional faculty to the objectives and strategies of TTT. In the opinion of this writer, this would not have helped because;

1 most faculty already knew about TTT, and

2. there were so many other wounds festering.

The model itself was workable and could have been more effective in a better setting.

PITTSBURGH TTT PROJECT

TAYLOR-ALLDERDICE FIELD SITE

D. LITMAN (Ed.)

PITTSBURGH PUBLIC SCHOOLS

Taylor-Allderdice High School
(1972-1973)

Superintendent - Louis Kishkunas

Associate Superintendent - Mary Molyneaux

Area Superintendent - Helen S. Faison

Principal - William Fisher

Science Department Head - Doris Litman

University of Pittsburgh Faculty Coordinator - Marjorie Muehlke

Discipline Faculty

Joseph Mrochek

Marjorie Muehlke

The TTT Science Education Program at
Taylor-Allderdice High School

I. Site Description

Taylor-Allderdice is a large urban high school within the school district of the city of Pittsburgh. It serves about 3,200 students in grades 8 through 12. Various racial and ethnic backgrounds are represented by the student body as are several socio-economic levels. The predominant ethnic representation is Jewish, with approximately 60% of the students belonging to this group. Approximately 25% of the students are predominantly of other white ethnic and religious identifications and the remaining 15% are black. The background of most students is middle class but the range is from low middle class to high middle classes for the total student population. Approximately 70% of the graduating class pursues further education at the four year college or university level and an additional 10% select two year colleges or technical training.

The science department at Taylor-Allderdice consists of 19 teachers serving approximately 1,900 students. It is a comparatively young department with an average age of about 33 years. The average total teaching experience for department members is about 9.3 years while the average teaching experience of the staff at Taylor-Allderdice is about six years. In a recent Middle States Association of Colleges and Secondary Schools evaluation, the high educational preparation of the staff was commended. Currently, the academic status of the staff can be described as follows:

1. Two candidates for the doctoral degree;

2. Two individuals, with approximately 50 credits each, beyond the master's degree level;

3. Four teachers completing the requirements for the master's degree;

4. Four staff members in early and middle stages of pursuing a master's degree; and

5. Three teachers at the baccalaureate level.

The science program at Taylor-Allderdice is strongly influenced by the high priority ascribed to science education by the students and communities it serves. That it experiences above average success in meeting this priority is reflected in the assessment of the Middle States' Evaluation Committee. The specific commendations (in addition to the one already mentioned) were for: a wide variety of course offerings in science; initiation of Advanced Placement course in several disciplines; scheduling of laboratory periods for all college preparatory courses; and, a computer augmented instruction porgram. A further influence has been the development of a district-wide program for academically talented students known as the Pittsburgh Scholars Program (PSP). Within this program, special courses have been developed and implemented for students who have been identified as capable of enriched or accelerated work in the academic disciplines. Though the courses offered to such students have been developed on a system-wide basis, individual schools and teachers are encouraged to adapt or modify these courses to the needs of their students. The following is a description of the 13 science courses offered to students at Taylor-Allderdice:

1. Eighth Grade General Science (PSP Students)
2. Ninth Grade Physical Scinece (Mainstream Students)
3. Biology
    - a) PSP Biology I (Ninth Grade PSP Students)
    - b) Biology I (Mainstream Students)
    - c) Biology II (Mainstream and PSP Students: Grades Eleven and Twelve)
    - d) Advanced Placement Biology
4. Chemistry
    - a) PSP Chemistry I (Tenth Grade PSP Students)
    - b) Chemistry I (Mainstream Students: Grade Eleven)
    - c) Advanced Placement Chemistry
5. Physics
    - a) PSP Physics I (PSP Students: Grade Eleven)
    - b) Physics I (Mainstream Students: Grade Twelve)
    - c) Advanced Placement Physics
6. Earth and Space Science (Mainstream Students: Grades Eleven and Twelve)

II. Program Description

A. Conditions.

Taylor-Allderdice became a site for the TTT Science Education Program through the efforts of the Science Department Chairman, a TTT doctoral intern. The site had specific values, goals and limitations which were expressed as follows:

1. Stipends for MAT and PY interns were not available.

2. Teachers involved in the program were unwilling to be replaced in the classroom even by a TTT intern certified to teach science.

3. Teachers who would be involved in the program were too far advanced in their own degree program to become MAT interns in the TTT program.

4. The site wished to afford all supervising teachers and their student teachers, regardless of their university affiliation, the opportunity to participate in a program that had purpose and direction.

5. Teachers involved in the program desired an oppprtunity for professional growth and to re-examine their own philosophies, objectives, techniques, strategies relating to teaching and their attitudes toward teaching and toward students.

6. Teachers involved in the program wanted an opportunity to learn from each other by sharing problems and solutions to increase cooperation and foster cohesiveness within the science department.

7. The site and its teachers wished to exercise greater control over the training program for student teachers thus allowing the development of policies and practices which were consistent with those of the school system and with the needs of the site's students and teachers.

8. The site and its teachers were acutely sensitive to maintaining the quality and nature of science instruction valued by the communities it serves.

In a meeting involving university representatives of the TTT Project, the TTT Science Program and the administrative staff of the site school held in April, 1972, the decision was made to implement the program beginning September, 1972. Subsequently, the program was described at a science department meeting at the site to allow all interested teachers to express their concerns and desire to participate. Cooperating teachers were identified for the program on the following basis:

1. their desire to participate, and

2. the compatibility of their teaching responsibilities and schedules to the needs of the interns and the program.

B. Organization.

The *Site Cybernetic Model: Taylor-Allderdice*, presented on the next page, shows the flow of information from the site (Taylor-Allderdice) to the program development center and the TTT Project. The flow of responsibility within the Program Project and Site is also explicated in the Model. [illegible] differs from the organizational model of other TTT Science Education Program sites in the following respects:

1. the inclusion of the Principal,

2. the designation of the Taylor-Allderdice Science Department Chairman as a Co-Site Coordinator,

3. replacement of the Site Committee by a Taylor-Allderdice science teacher to act in the capacity of Faculty Liaison, and

4. direct communication between Taylor-Allderdice pupils and program faculty.

The following individuals were involved in the TTT Science Education Program at Taylor-Allderdice.

First Semester

Facilitators

Dr. Charles Ruch	TTT Project Director University of Pittsburgh
Dr. Marjorie Muehlke	Co-Site Coordinator Secondary Education Department Science Education University of Pittsburgh
Doris Litman	Co-Site Coordinator Science Department Chairman Taylor Allderdice High School
Joseph Perz	Faculty Liaison Science Department Taylor Allderdice High School

Taylor Allderdice Teachers	TTT Interns
Amelia Brusca, Biology	Sarah Dreher University of Pittsburgh
Walter Treser, PSP Science Grade 8	Ed Henke University of Pittsburgh
J. Michael Shore, Physics	Ed Henke University of Pittsburgh
Jack Salsi, Biology	Tim Schmidt University of Pittsburgh
Nancy Fitzgerald, Chemistry	Mickey Samples Carnegie Mellon University

Second Semester

Facilitators

Dr. Charles Ruch	TTT Project Director University of Pittsburgh
Dr. Marjorie Muehlke	Co-Site Coordinator Secondary Education Department Science Education University of Pittsburgh

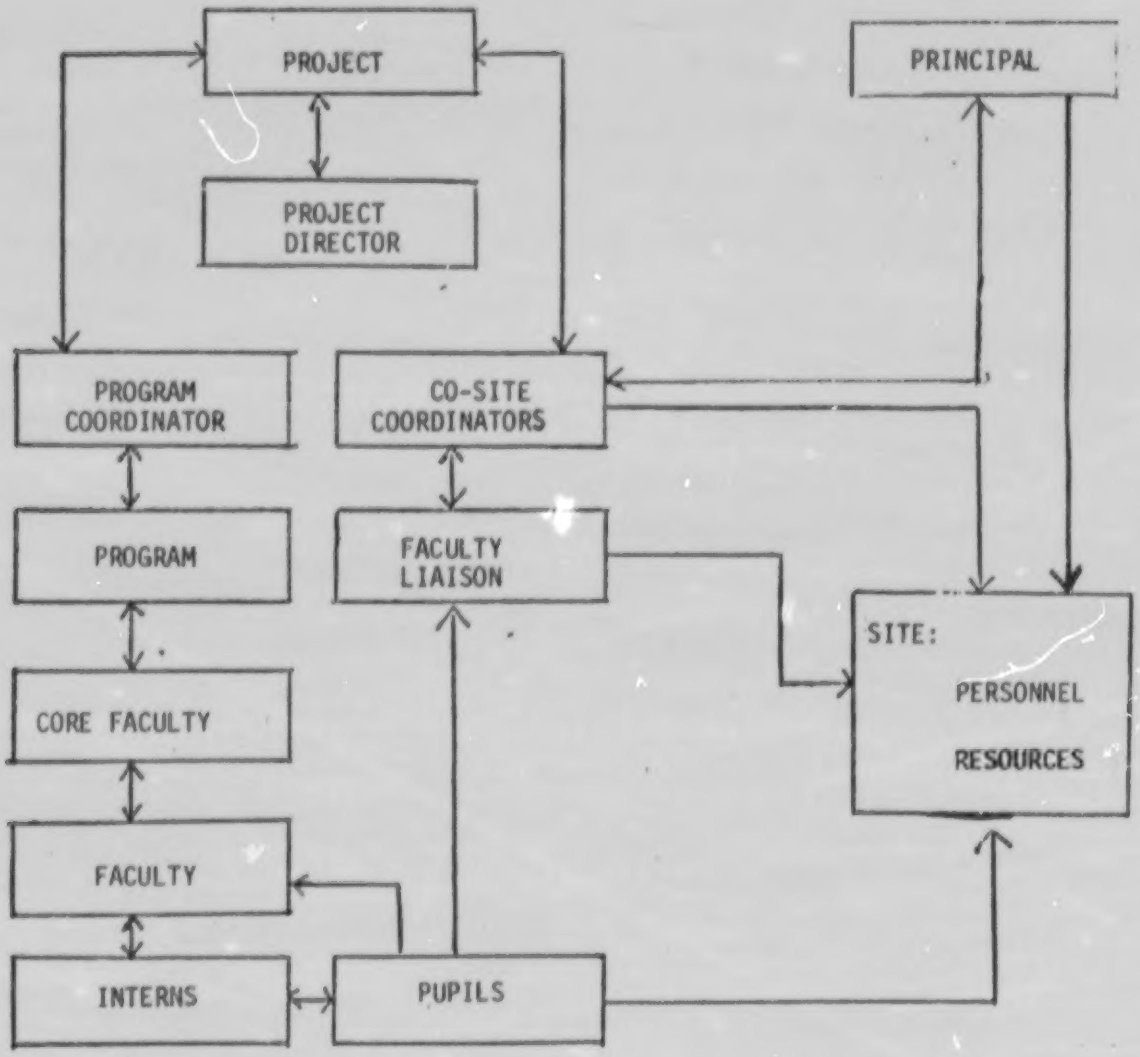
Second Semester - Cont.

Facilitators

Doris Litman	Co-Site Soordinator Science Department Chairman Taylor Allderdice High Shhool
Amelia Brusca	Faculty Liaison Science Department Taylor Allderdice High School

Taylor Allderdice Teachers	TTT Interns
Joseph Perz, Biology	Constance Minninger University of Pittsburgh
Walter Treser, PSP Science Grade 8	Ed Henke University of Pittsburgh
J. Michael Shore, Physics	Ed Henke University of Pittsburgh
Jack Salsi, Biology	Constance Minninger University of Pittsburgh
Dolores Kubiak, Chemistry	Mark Sampsell Carnegie Mellon University
David Nagy, Chemistry	Alan Meden University of Pittsburgh
Linda Bush, Physics	Bernard Luksich Carnegie Mellon University

Site Cybernetic Model:
Taylor-Allderdice High School



C. Processes.

TTT interns participating in the training program at Taylor-Allderdice were scheduled for teaching responsibilities during the first three periods of each school day. They were to reserve the fourth period each day for planning and preparation periods with the cooperating teacher or for site seminars. Their role was that of a professional teacher and they were expected to meet the standards and responsibilities set for the regular staff. To meet state requirements and to satisfy legal and ethical responsibilities of the school system, the cooperating teacher was present in the TTT classroom at all times.

The activities and experiences provided at the site for the TTT interns and the cooperating teachers included:

1. teaching experience for TTT interns,
2. observations including:
    a) Peer observations by TTT interns.
    b) Peer observations by Taylor-Allderdice Teachers.
    c) Observation of all TTT interns by all cooperating teachers.
    d) Observations by TTT interns of all cooperating teachers and selected teachers not involved in the program, and
3. seminars.

Everyone involved in the program at Taylor-Allderdice met for a seminar on a weekly basis with Dr. Muehlke. The seminars provided opportunity for:

a) discussion of current problems or issues related to the conduct of the program,
b) a workshop dealing with issues and problems in teaching,

c) presentation and examination of contemporary issues and trends in science teaching,

d) evaluation of the progress of TTT interns.

The following are some of the issues that have been attended to during the seminars:

1. the role of the student teacher,

2. the role of the cooperating teacher,

3. development of a list of competencies to be achieved by student teachers,

4. the process of inquiry in the scinece classroom,

5. writing behavioral objectives in the cognitive domain,

6. the art of questioning,

7. providing for the non-motivated or slow-learning science student,

8. the role of computer assisted instruction in science teaching,

9. project Solo,

10. individualized instruction in science,

11. the Oakleaf Project,

12. contemporary learning theories,

13. unified Science: An Integrated Science Curriculum,

14. models of integrated science teaching, and

15. models of teaching.

Topics for seminars were determined as the needs of the program's participants evolved. Examples of the devices that were used in seminars to stimulate discussion are included at the end of this report. The "Teacher Competencies" list was used to guide the teacher and the TTT intern in developing criteria for evaluation of the intern's progress in the program. The outline for "Developing Question-Answer Skills" helped to focus attention on this aspect of classroom communication. The "Science Classroom Activity Checklist" was used by both cooperating teachers and TTT interns to assess their own classroom behavior. These instruments, along with other divices, were used to stimulate discussion of basic assumptions about how teachers learn and to begin an examination of contemporary learning theory.

D. Outcomes.

For TTT interns, the Taylor-Allderdice site offered teaching experiences in a large urban high school with an opportunity to select classroom settings from many grade levels and from several areas of science specialization. It also provided access to high school students with a wide range of abilities, interests and motivation. The nature of the teaching staff allowed interns class contact with experienced teachers who had, as a group, demonstrated ocntinued concern for professional growth and the quality of classroom instruction. The staff's further interest in the issues and problems of teacher training created a climate which fostered definition of expectations for intern competency achievement, by the University, cooperating teachers and the school. The close communication between the school staff and the university staff resulted in better mutual understanding of their approaches to problems and issues in contemporary urban education. This resulted in obviating the frequent dilemma of student teachers who find themselves in a position of conflicting allegiance to the disparate philosophies, goals and practices of the University, the school and the cooperating teacher. Finally, close contact with all teachers participating in the program created a multicaceted input of information that was used to assess intern progress, prescribe learning and teaching experiences and staffing.

The outcomes described above relating to the development and implementation of a teacher training program, had value for the cooperating teachers participating in the program at Taylor-Allderdice. The major outcome in this respect was a new perception of the problems of student teachers and new approaches to their solutions. Additionally, the program provided an opportunity for a marked increase in the staff's professional growth through self-evaluation and through sharing problems and solutions with the university staff, TTT interns and colleagues. Another outcome was an increase of cooperation and cohesiveness within the science department. A major contribution of the University to these outcomes was creating conditions which provide the opportunity for professional development in the areas of contemporary knowledge knowledge and trends in educational processes, practices, technology and learning theory.

APPENDIX

TEACHER COMPETENCIES

	1	2	3
1. Establish and maintain purposeful activity in the classroom			
2. Utilize performance objectives in instruction			
3. Plan and use a variety of teaching strategies.			
4. Demonstrate knowledge of subject matter.			
5. Communicate subject matter to students at appropriate levels.			
6. Provide for individual differences among students.			
7. Plan and implement a variety of learning environments.			
8. Develop the ability to sequence instruction.			
9. Utilize teaching aids effectively.			
10. Make use of balanced student participation.			
11. Develop appropriate question-asking skills.			
12. Make use of student ideas and questions during discussion.			
13. Demonstrate flexibility in carrying out instruction.			
14. Diagnose learning difficulties and take remedial action.			
15. Design and administer appropriate curricular tests.			
16. Apply on-going evaluation as part of the learning process.			
17. Develop competencies in self-evaluation.			
18. Plan and use appropriate laboratory experience.			
19. Integrate laboratory experiences and classroom activities.			

Teacher Competencies - Con't.

	1	2	3
20. Develop student willingness and ability to inquire.			

1. Superior achievement
2. Adequate achievement
3. Need additional work in this area

Excerpt from: Developing Teacher Competencies
James Weigand, editor, Prentice Hall Pub.

Developing Question-Asking Skills

I. Good questions:
A) Provide for different levels of thinking
B) Judged by its clarity, sensible word order
C) Provide for reflective and critical thinking
D) Relates meaningfully to experiences of person being questioned
E) Facilitate development of desirable attitudes
F) Develop and sustain interest
G) Provide new ways of dealing with subject matter
H) Given quality and purpose to evaluation

II. Effects of Question determined by:
A) Level of thinking it stimulates
B) Kind of response the question elicits because of the way it is worded

III. Types of questions
A) Narrow questions require low level thinking, short factual answers; or other predictable responses
1.) Examples:
a) What is the largest city in Ohio?
b) Why don't we use the word ain't today?
2.) Test Samples:
___a. What kind of animal is this?
___b. How might life be different if England had won the Revolutionary War?
___c. Does 45 consist of 2 numerals?
3.) Practice: Write 2 narrow questions.
a)
b)
B) Broad Questions--1) should permit a variety of acceptable responses, 2) designed to be thought provoking, 3) cause person to hypothesize, predict, infer, involve expressions of opinion, judgment, feeling.
4.) Lead to development of new insights, ideals, appreciations, desirable attitude, problem-solving
5.) Move students away from guessing what answers teachers want
6.) Examples of broad question:
a) If you had chosen another field of interest, how might you have viewed this chapter?
b) What is your opinion on the importance of questioning as a teacher competency?
7.) Test Samples:
___a. How do you define the word questioning?
___b. What do you think are some of the things that might happen if you begun to teach a group of children a lesson without planning any questions?

___c. Do you agree with the emphasis educators are placing on the individualization of instruction?

8.) Practice: Write two broad questions.
a)
b)

C) Cognitive-Memory Questions

1.) Narrow questions limited to lowest level of thinking; reproduction of facts, definitions; or other remembered information.

2.) Examples
a) Define: What is poetry?
b) Name: What is the subject of the sentence?
c) Yes or No: Does the paragraph have a topic sentence?
d) Identify observe: What figure of speech is employed in the 3rd line?
e) Designate: How many classes of words can you find?
f) Recall: When was Shakespeare born?

3.) Test Samples:
___a, What did you observe in this demonstration?
___b. What is meant by a natural resource?
___c. Why is fishing important in New England?

4.) Practice: Write 3 cognitive-memory questions.
a)
b)
c)

D) Convergent questions

1.) Narrow questions, too, but require person to put facts together and construct an answer.

2.) There is usually one best in right answer.

3.) Operations performed in answering a cognitive-memory question
a) Explaining
b) Stating relationships
c) Associating and relating
d) Comparing and contrasting

4.) Examples:
a) Why can't these two lines be made into a rectangle?
b) Why do plants grow toward light?
c) Why aren't languages all the same if they come from one source?

5.) Test Samples
___a. What are some of the ways you might use to stop a forest fire?
___b. Why does the sun appear to move in the sky?
___c. What is the name of the force that causes iron filings to stick to the magnet?

6.) Practice: Write two covergent questions.
a)
b).

E) Divergent Questions: thought-provoking questions, open-ended.

1.) Person organizes elements into new patterns

2.) Person creates problem situations, synthesizes ideas, constructs meaningful solution.

3.) Operation: Predicting, hypothesizing, inferring

4.) Examples
a) What predictions can you make about what is going to happen to the marbles?

b) How might our country be different today if we never had slavery?

c) What would the effect of this poem be if it were written in prose?

5.) Test samples use symbols C-M, C, D, or E.

___a. How do you explain why the green ball did not float?

___b. What are some ways a fish might live differently if the type of water in which he lives is changed?

___c. In the numeral 33, what number does the first 3 name?

___d. Suppose you were a caveman trying to write a message about your recent hunting trip using nothing but a picture, how would you do it?

F) Evaluative--person must judge, value, justify a choice or defend a position.

1.) Person must organize knowledge, formulate an opinion and take a self-selected position; must use evidence

2.) Examples:

___a. What makes this picture better than that one?

___b. Why do you say this is the best order for arranging these objects?

3.) Test samples: Identify using C-M, C, D, or E.

___a. Is tuberculosis an infectious disease?

___b. Which president do you think did the most for our country?

___c. Why is a symphonic poem like a narrative?

___d. In your opinion which folk singer is the best?

4.) Practice: Write 2 evaluative questions.

a)

b)

SCIENCE CLASSROOM ACTIVITY CHECKLIST

1. The purpose of this checklist is to determine how you perceive the activities in your science classroom.
2. Mark all answers on the answer sheet, do not make marks on this booklet.
3. All statements should be answered on the answer sheet by blackening the space under the chosen response, in pencil.
4. There should be only one mark for each statement.
5. Please do not write your name on this booklet or on the answer sheet. Do not write your teacher's name on the answer sheet.

If the statement describes what occurs in your classroom, blacken the space under the letter T (TRUE) on the answer sheet; if it does not, blacken in the space under the letter F(False).

Sample Question

0. Our science teacher usually takes class attendance.

Answer Sheet

T F

0. [ ] [ ]

SECTION A

1. Much of our class time is spent listening to our teacher tell us about science.
2. My teacher admits his mistakes most of the time.
3. If there is a discussion among students, the teacher usually tells us who is right.
4. My teacher often repeats almost exactly what our books say.
5. My teacher often asks us to explain the meaning of certain things in our books.
6. My teacher shows us that science has almost all of the answers to questions about nature.
7. My teacher usually talks to the whole class rather than groups of students or individuals.
8. Our teacher often tells us that we are doing good work.
9. Our teacher asks questions that cause us to think about things that we have learned in other science activities.
10. Our teacher often asks questions that cause us to think about the evidence that is behind statements that are made in our books.

SECTION B

11. My job is to take notes and memorize what the teacher tells us.
12. We students are often allowed time in class to talk among ourselves about ideas in science.
13. Much of our class time is spent answering out loud or in writing, questions that are written in our books or on study guides.
14. Classroom demonstrations are usually done by students rather than by the teacher.

15. We sometimes discuss the problems faced by scientists in the discovery of a scientific idea.

16. My teacher encourages students to disagree with him.

17. The questions we usually ask in class are to clear up what we get from the teacher or from our books.

18. We often talk about the kind of evidence scientist's use to make conclusions.

SECTION C

19. When reading our books, we are expected to know most of the details that are stated there.

20. Our teacher frequently gives us lists of words for which we write definitions.

21. When reading our books, we are expected to look for the main ideas and ways to investigate them.

22. Our teacher teaches us to raise questions in our minds as we read our books.

23. Our books and the teacher's notes are about the only sources of science knowledge that are discussed in class.

24. We sometimes read the original writings of scientists.

25. We often write reports from other books or from magazines.

SECTION D

26. Our tests include many questions based on things that we have learned from our laboratory activities.

27. Our tests often ask us to write out definitions of words.

28. Our tests often ask us to relate things that we have learned at different times.

29. Our tests often ask us to figure out answers to new problems.

30. Our tests often give us new data and ask us to draw conclusions from these data.

31. Our tests often ask us to name or put labels on drawings.

SECTION E

32. My teacher usually tells us step-by-step what we are to do in the laboratory.

33. We spend some time before every laboratory activity determining the purpose of the experiment.

34. We often cannot finish our experiments because it takes so long to gather equipment and prepare other materials.

35. We often set up experiments to investigate questions that come up in class.

36. We usually do an experiment and gather data about a topic before we discuss the topic in class.

37. Most of the time we study the same topic we are experimenting with.

38. We usually know the answer to the laboratory problem that we are investigating before we begin the experiment.

SECTION F

39. Many of the experiments that are in our books are done by the teacher or other students while the class watches.

40. The data that I collect is often different from data that are collected by other students.

41. Our teacher is often busy grading papers or doing some other personal work while we are performing experiments.

42. During an experiment we record our data at the time we make our observations.

43. We are sometimes asked to design our own experiment to answer a question that puzzles us.

44. We often ask the teacher if we are doing the right thing in our experiments.

45. Instead of telling us the answers our teacher answers most of our questions about the experiments we are doing by asking us questions.

46. We spend less than one-half of our time in science doing experiments and other related activities.

47. We sometimes have the chance to try our own ways of doing the experiments.

SECTION G

48. We talk about what we have observed in each experiment within a day or two after we complete it.

49. After most experiments, we compare the data that we have collected with the data of other individuals or groups.

50. Our teacher often grades our books or reports for neatness.

51. In class we are allowed to go beyond the regular activities and do some experimenting on our own.

52. We usually have a chance to study the conclusions that we have made from our experimental data.

53. The class is usually able to explain all the data that are collected in our laboratory activities.

54. My teacher often asks questions that cause us to think about the evidence we get from our experiments.

55. We sometimes take field trips to observe things we are studying in science.

PITTSBURGH TTT PROJECT

WARRENDALE FIELD COMPONENT

S. HUGHES (Ed.)

WARRENDALE YOUTH DEVELOPMENT CENTER

Superintendent, Allegheny Intermediate Unit #3
Harold E. Oyer

Assistant Superintendent - James Jordan

Director, Institutionalized Children's Programs - James Currie

Executive Director - James Hurd

Educational Specialist - Thomas Timmey

University of Pittsburgh Faculty Coordinator - Sean Hughes

Discipline Faculty

Michael Morris

Christopher Rawson

Margaret Renner

Doctoral Fellows

Barbara Daykon

Luanne Kubish

MAT's

Elizabeth Harris

Robert Jacobs

Catherine White

Nancy Latshaw

William McCloskey

Gerald Angerman

Professional Year Students

Samuel Hutton

Albert Mueser

Warrendale Youth Development Center - TTT - 1972-73

I. Organiaation

The Warrendale Youth Development Center's Educational Program was operated by the Institutionalized Childern's Program of Allegheny Intermediate Unit #3. Warrendale became a site in 1972-73. Its analogue, Oakdale, had already been a site for a number of years. It was decided to have an umbrella site committee for Intermediate Unit project. Oakdale was already functioning with a site committee. The plan was to plug Warrendale into this already established committee. This was especially the thinking of the Intermediate Unit Personnel. Unfortunately, Oakdale was closed in late fall 1972 and there was a constant threat of Warrendale being closed from January, 1973 until the TTT project finished in June of that year.

During these anxious times there did not seem to be much sense in establishing a site committee nor, indeed, was there much energy for such activity on the part of the Warrendale and Intermediate Unit staff staff.

The MAT and PY students worked individually, teamed with their peers and Warrendale staff in classroom and small group activities. They also entered into individual contracts and tutorial relationships with Warrendale students. The basic organizational model was the building and to a lesser extent departments. There was no focus on classroom organization. MAT's and PY's addressed themselves to all students in terms of Social Studies or English--the two TTT programs in the site.

Because of the non-participation of the General Braddock schools in the 1972-73 project and the closing of Oakdale there was an overflow of MATs and PYs from those sites. Some of these were absorbed by the Warrendale site. The same was true for discipline and School of Education faculty assigned to these non-functioning sites.

At Warrendale this permitted the assignment of one MAT and two PYs to the learning center. Another MAT was able to devote a significant amount of his time to the Reading and Communications Skills Laboratory.

Supervision was handled almost exclusively by discipline faculty. Programs and sites were shorthanded on doctoral students during 1972-73. Discipline faculty, however, did become involved in supervision of teaching to an extent beyond what they had ever done before.

English and Social Studies MATs and PYs planned cooperatively, most notably in a "reading, writing, speaking" project on contemporary social issues. Another project involved writing, acting and video taping short dramas.

Independent study was offered by Pitt faculty to the staff at Warrendale who were interested. Nine people took advantage of this offer to earn their credits in English or Secondary Education.

The atmosphere at Warrendale during 1972-73, as noted above, was not the most beneficial for developing curricula, beginning new programs or entering into close working relationships with the site staff.

This was further complicated by the fact that everyone knew that TTT project funds would end June 30, 1973.

The MATs and PYs did provide support and inturn were supported by Warrendale staff through this difficult time. It was a measure of the good will toward the project that no problems arose between Warrendale staff and TTT project staff.

Perhaps the moral of this story is--do not begin a new site in the last year of a project budget especially if the site is going through serious difficulties bearing on its very existence.

PITTSBURGH TTT PROJECT

WESTINGHOUSE HIGH SCHOOL FIELD SITE

E. WILLIAMS (Ed.)

PITTSBURGH PUBLIC SCHOOLS

WESTINGHOUSE HIGH SCHOOL

Superintendent - Louis Kishkunas

Associate Superintendent - Mary Molyneaux

Area Superintendent - Helen S. Faison

Principal - Ted Vassar

Mathematics Department Head - Erma Williams

Community Representative - Arie Kyser

University of Pittsburgh Co-ordinator

Wade Baird (1971-72)

Erma Williams (1972-73)

Discipline Faculty

Samuel Johnson (1971-72)

Earle Myers (1971-73)

Stewart Milner (1972-73)

Doctoral Intern (1972-73)

Beverly Michael

Doctoral Fellows (1971-72)

Frederick Harris

Beverly Michael

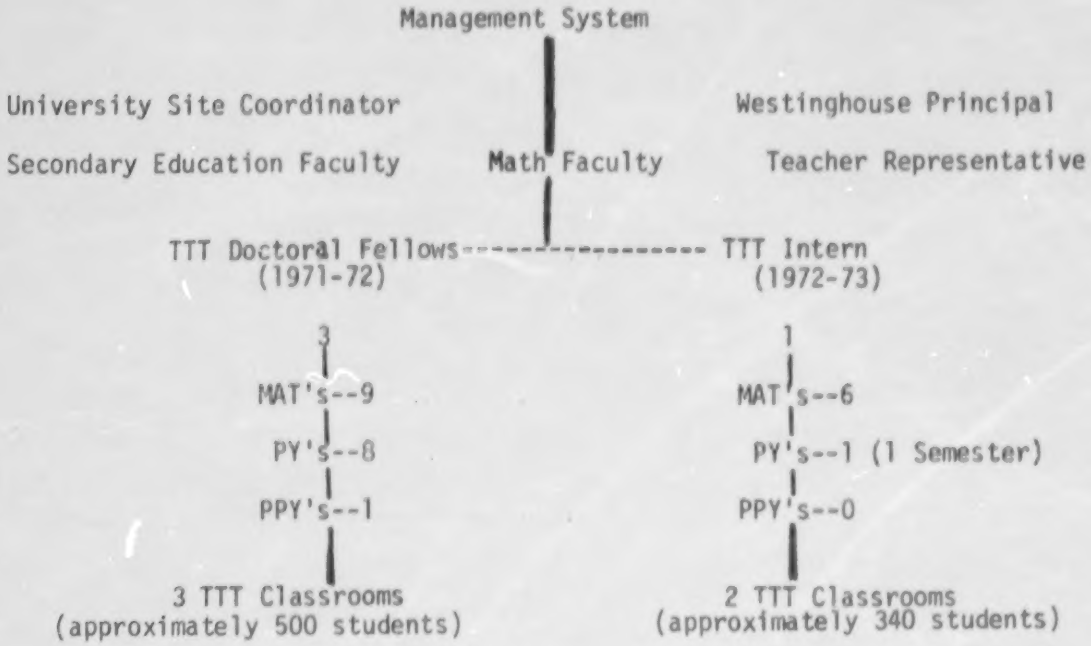
Westinghouse High School

I. Personnel

The Westinghouse Site is a large Junior-Senior High School in the city of Pittsburgh. Mr. Vassar, the principal, has been affiliated with the TTT since its inception at the University of Pittsburgh. Westinghouse, located in Homewood Brushton, is an urban inner-city school containing 2,700 students of whom 99 percent are Black. Approximately 40 percent attend four year colleges and universities. The TTT component involved three eighth grade mathematics classrooms during 1971-72, and two classrooms during 1972-73.

II. Organization

A. The general management model for the site was as follows:


Management System
University Site Coordinator
Secondary Education Faculty
Math Faculty
Westinghouse Principal
Teacher Representative
TTT Doctoral Fellows (1971-72)
TTT Intern (1972-73)
3
MAT's--9
PY's--8
PPY's--1
3 TTT Classrooms (approximately 500 students)
1
MAT's--6
PY's--1 (1 Semester)
PPY's--0
2 TTT Classrooms (approximately 340 students)

The management of the Westinghouse site was very smooth and successful. There was open communication between all members of the management system. This was largely due to the following:

1. Mr. Vassar, principal, has been affiliated with TTT from its inception.

2. Erma Williams, the teacher representative, provided daily direct management and coordination of the site. She facilitated the organizational and managerial details with the high school administrators and the TTT coordinator. She also was a former student of the University of Pittsburgh's Experienced Teacher Fellowship Program. Erma became program coordinator for 1972-73.

3. Dr. Wade K. Baird, coordinator, provided university management and coordination. He had once taught at Westinghouse.

4. Beverly Michael and Fred Harris, doctoral students, were both experienced teachers and had previously taught at Westinghouse. Beverly was an intern during 1972-73.

5. The MAT and TTT students were considered teachers not student teachers. There was no master or cooperating teacher, it was the team that took the responsibilities of a full time teacher.

6. TTT students stayed on site the entire teaching day to teach, plan with team members, attend seminars and be supervised.

7. Math curriculum, methods and some common input seminars were held at Westinghouse to enable the students to spend time at the site and to relate the seminars to everyday teaching.

8. Doctoral students divided site responsibilities into curriculum

and supervision. They also initiated seminars and participated in site and core faculty management.

B. Management difficulties arose from the following.

1. There was no time period scheduled during the day when all the TTT site staff could meet together for seminars and planning.

2. Teams did not schedule plan period when teachers could meet with their supporting teachers.

3. There was not enough audio-visual aide equipment available for supervision and teaching purpose.

4. The secondary education curriculum and methods persons did not follow through on seminars, therefore adding more burden to the TTT doctoral students. However, these difficulties were resolved for the 1972-73 program.

5. The MAT program lacked a research course and advanced courses in human development and personality theory.

C. Site Committee.

The Westinghouse site committee was never organized per se' Responsibility for starting the committee was not clearly defined. Also, there seemed little interest from designated representatives to participate on the committee. A number of school-community activities were conducted over the course of the project such as dinners, meetings, conferences, etc. The community contact with TTT was limited to:

1. Bus tour of community before the school year began.

2. Introduction and explanation of TTT to a seventh grade parents' meeting.

3. Community seminar held for TTT teacher trainees to acquaint them with leaders and services of the community.

Mrs. Kyser, the community representative from the Westinghouse, served on the Social Studies core faculty (1971-72) and represented the Westinghouse community for TTT. The disadvantage was that Westinghouse only had a math program and the school community at Westinghouse was not represented at the math core faculty meetings. The math community representative was from Penn-Trafford (1971-72).

D. Organizational Plan for PY's and MAT's.

The students were organized into teams and a team was responsible for covering all instruction for a regular teaching position.

During the first year (1971-72) there was an exchange of two PY's from the Home for Crippled Children's mathematics program to Westinghouse for a period of six weeks, one day per week.

III. Training

A. PY's and/a MAT's

Site training was the most successful aspect of the TTT math program. A TTT teacher trainee will begin their first year of teaching with a second year teacher's experience. The full year internship added to the full day participation in the school lended the reality of a regular first year teaching experience.

Each student, along with an advisor from the core faculty, created a competency based plan of study. Most of the competencies could be accomplished at the site because of the following:

1. group and individual planning sessions
2. direct observation
3. peer supervision
4. pre-conference-observation-post conference supervision
5. use of math resource center
6. use of computer terminals
7. math, curriculum development, and methods seminar
8. classroom mamagement and instruction, both on an individual and team teaching basis.

Common input and community seminars were the only ones not held at the site. This on site training program will integrate four (4) broad content areas:

1. Mathematics discipline
2. Methods of teaching mathematics and supervisory experiences.
3. Specific teaching strategies
4. Common Input; human development small group with communication skills, etc.

The overall focus of the program will be to identify and assist the student in the acquisition of the competencies necessary for the teaching of mathematics.

B. Specific courses taught in the site included.

1. Math content courses developed on site. Two math seminars were held at Westinghouse by faculty from the University of Pittsburgh Math Department. One seminar, for all TTT teachers was in advanced mathematics. The other seminar, calculus, was for those who had not

taken the course or wanted a refresher. Participants agreed that on site seminars were very successful. The only criticism was that much of the math was not related to the daily teaching situation.

2. Math method courses developed on site. The secondary education appointed one person to teach math method seminars on site every other week. The person appointed however, was very sporatic in coming to the site. It was requested and approved during a core faculty meeting that the teacher representative and doctoral students handle the methods seminar the second semester to avail the TTT teachers of a regularly scheduled methods seminar. The TTT teachers also received methods input from curriculum seminars and supervision conducted by doctoral students.

3. Inter-Disciplinary Seminar. TTT facilitated a weekly seminar involving the schools of Social Work, Counselor Education, and Educational Psychology, support personnel from Westinghouse and TTT teacher trainees.

C. Instruction was covered by teams of PY's and MAT's using the following structures and resources:

1. Math Resource Center. One room was made available to TTT for planning a library of materials, tutoring center, small group work, individual math programs and seminars.

2. Math Resource Lab. Instead of having one room set aside as a Math Lab, lab activities were conducted in the classroom. TTT teach teachers used both commercially made lab experiments and those made by the TTT staff. This provided an alternative method of teaching and

more classroom involvement by the student.

3. Team Teaching. Team teaching was successful at Westinghouse. The TTT teacher was in charge of one class and supported in two others. Difficulty arose because the role of the support was not defined and not enough time was scheduled into the day for planning. The team teaching situation did allow the support teacher to take small groups to the resource lab room for small group instruction.

Supervision was the prim responsibility of the TTT doctoral fellows supported by faculty from the site and the University.

Two innovative instructional techniques piloted by TTT were contract learning and individualized learning units. Curriculum content developed by TTT included:

1. Pre-Algebra. After the first nine weeks all seventh grade students with A, B, or C averages were tested and five classes of pre-algebra was startee and taught by TTT teachers from this group of students from this group of students the eighth grade scholars class was chosen.

2. Basic Algebra. A course that would allow students with a B/C average complete Algebra I in two years was piloted by TTT teachers. It was successful and two more sections were added for the 1972-73 school year.

During 1972-73 the project conducted two in service seminars for eight (8) Westinghouse faculty.

TTT Math seminar (4 credits) (winter)

1. Objectives. Discuss the background material necessary to

develop concepts taught in the Pittsburgh Public Schools Algebra I Scholars program.

To include the following topics in the seminar: sets and the operations and the real numbers; absolute value; open sentence and inequalities; factoring polynomials; exponents and radicals; quadratic equations and inequalities; introduction to logic; right triangle trigonometry.

TTT Math Seminar -- (2 credits) (spring)

The seminar will have the same structure as the winter term but will discuss the following topics: introduction to groups; Venn diagrams and applications; introduction to vectors, matrices, and determinants; step-functions; the Euclidean algorithm and diophantine analysis; conic sections, their forms and graphing.

Curriculum materials for the courses were developed through these seminars.

IV. Experiences

A. Role of University Personnel.

University personnel conducted seminars and worked with students on independent study projects.

B. Role of Community Personnel.

Community personnel participated on a program core faculty.

C. Role of TTT doctoral students.

Doctoral fellows and interns provided supervision and some instruction for PY's and MAT's.

D. General outcomes from TTT beyond 1973 included:

1. A Mathematics Laboratory operating.

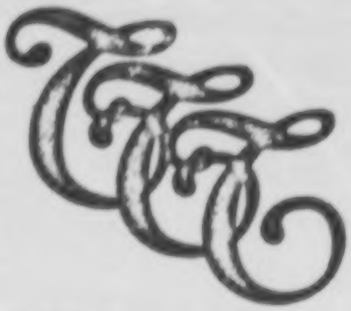
2. Full time paraprofessional for the laboratory

3. Of the four teachers involved on the laboratory; three are TTT trained.

4. In the total Mathematics Department of 11, five are TTT trained

5. The laboratory (for eighth grade) with enrollment of 10 students per class period. Remedial in nature.

6. Laboratory involved small group and remedial instructional techniques.



TECHNICAL

APPENDIXES

APPENDIX A

SUMMARY

PROJECT FACULTY & STAFF

	1969-70	1970-71	1971-72	1972-73
College of Arts & Sciences:				
English	0	5	6	5
History/Social Science	0	1	3	5
Mathematics	0	0	2	2
School of Education:				
Counselor Education	12	16	12	10
Elementary Education	4	0	0	0
Reading & Lang. Arts	1	3	4	4
Secondary Education	1	10	15	14
Educational Adminstration	1	1	1	1
Schools:	0	7	7	4
Communities:	0	0	7	4

Project Staff

Name	Rank/Project Dept./Position	% Effort TTT Project 1969-70	1970-71	1971-72	1972-73
Guthrie, John	Assoc. Prof./ Dir. Counselor Ed.	65	60	31.2	
Ruch, Charles	Assoc. Prof/Dir. Counselor Ed.	15	50	25	19
Herron, John	Adm. Asst.	100	50	50	49
Elman, Nancy	GSA/Writing Asst Counselor Ed.	42	33	--	--
Haggarty, Maureen	GSA/	--	100	--	--
Marcavage, John	GSA	--	--	50	--
Reister, John	GSA	100	100/6 mo.	--	--
De Cenzo. Janet	Secretary				
Kimmel, Joan	Secretary				
Osborne, Marjorie	Secretary				
Taylor, Antoinette	Secretary				

College of Arts and Sciences

		% Effort TTT Project			
Name	Rank	1969-70	1970-71	1971-72	1972-73
History/Social Sciences					
Adams, John (CMU, History)	Research Historian	--	50	50	--
Dillenberg, Thomas (CMU,History)	Research Historian	--	--	33	50
Hua, George (Pitt, Asian History)	Teaching Fellow	--	--	--	100
Karsten, Peter (Pitt, History)	Associate Professor	--	--	33	--
Renner, Margaret (Pitt, Sociology)	Teaching Fellow	--	--	--	100
Troup, Alice (Pitt, Anthropology)	Teaching Fellow	--	--	--	100
Math					
Johnson, Samuel Pitt	Special Instructor	--	--	50	50
Meyers, Earl Pitt	Professor	--	--	50	50
English					
Brumble, David Pitt	Assistant Professor	--	33	50	--
Donnelly, Nancy Pitt	Assistant Professor	--	55	55	100
Elliot, Virginia Pitt	Associate Professor	--	33	--	--

College of Arts and Sciences - % Effort TTT Project - Continued

Name	Rank	1969-70	1970-71	1971-72	1972-73
English					
Feldman, Rose (Tratner) Pitt	Instructor	--	50	55	56
Helfand, Michael Pitt	Assistant Professor	--	--	33	33
Knapp, James Pitt	Associate Professor	--	33	33	--
Marshall, Robert Pitt	Dean of Arts & Sciences	--	50	--	--
Martin, Paul Pitt	Assistant Instructor	--	--	33	--
Papousek, Marilyn Pitt	Assistant Professor	--	--	--	33
Pritchard, Linda Pitt	Teaching Fellow	--	--	100	100
Rawson, Christopher Pitt	Assistant Professor	--	25	42	42
Siporin, Rae Pitt	Assistant to Vice Chancellor	--	33	13	--
Sternglass, Marilyn Pitt	Lecturer	--	--	--	100
Wion, Philip Pitt	Associate Professor	--	33	42	42

School of Education

		% Effort TTT Project			
Name	Rank	1969-70	1970-71	1971-72	1972-73
Educational Administration					
Kelly, James Pitt	Dean & Professor	10	--	--	--
Elementary Education					
DeFigio, Nicholas Pitt	Associate Professor	10	--	--	--
Gorman, Charles Pitt	Associate Professor	25	--	--	--
O'Gorman, David Pitt	Lecturer	10	--	--	--
Southworth, Horton Pitt	Dept. Chairman & Professor	10	--	--	--
Reading & Language Arts					
Nelson, Joan Pitt	Dept. Chairman & Associate Professor	--	25	33	33
Schiller, Susan Pitt	Instructor	--	--	50	--
Shoemaker, James Pitt	Lecturer	--	--	50	--
Stanton, Paul Pitt	Associate Professor	50	25	33	16
Winsand, Jean Pitt	Assistant Professor	--	50	--	33
Christian, Marilyn Pitt	Instructor	--	--	--	33

School of Education - % Effort of TTT Project - Continued

Name	Rank	1969-70	1970-71	1971-72	1972-73
Secondary Education					
Bell, Frederick Pitt	Associate Professor	--	--	25	25
Dilts, Robert Pitt	Assistant Professor	--	--	75	25
Dorow, Earnest Pitt	Dept. Chairman & Professor	--	33	--	--
Faith, William Pitt	Lecturer	--	33	--	--
Francis, Samuel Pitt	Dept. Chairman & Associate Professor	--	33	25	15
Hughes, Sean Pitt	Assistant Professor	75	50	50	25
Karl, David Pitt	Graduate Student Assistant	--	--	50	--
Koziol, Stephen Pitt	Associate Professor	--	--	50	50
Meade, Thomas Pitt	Assistant Professor	--	25	50	25
Morris, Michael Pitt	Assistant Instructor	--	--	--	100
Moser, Gene Pitt	Professor	--	--	25	--
Mrochik, Joseph Pitt	Graduate Student Assistant	--	--	--	25
Muehlke, Margery Pitt	Assistant Professor	--	--	--	25
Novak, John Pitt	Graduate Student Assistant	--	--	100	--

School of Education - % Effort of TTT Project - Continued

Name	Rank	1969-70	1970-71	1971-72	1972-73
Secondary Education					
Soderburgh, Peter Pitt	Professor	--	33	--	--
Sweeney, Mary Pitt	Graduate Student Assistant	--	--	100	--
Walker, Richard Pitt	Assistant Instructor	--	--	--	33
Walsh, Robert Pitt	Lecturer	--	50	--	--
Weir, Edward Pitt	Professor	--	25	--	--
Counselor Education					
Anderson, Tom Pitt	Lecturer	--	25	25	13
Baird, Wade Pitt	Assistant Professor	10	25	25	13
Campbell, Robert Pitt	Associate Professor	--	25	25	13
Connors, Canice Pitt	Assistant Professor	25	50	33	17
Harden, Beverly Pitt	Lecturer	100	50	--	--
Horgan, Jeremiah Pitt	Assistant Professor	10	50	50	13
Hughey, Andrew Pitt	Assistant Professor	40	50	25	25
Malley, Patrick Pitt	Associate Professor	25	--	--	--

School of Education - % Effort of TTT Project - Continued

Name	Rank	1969-70	1970-71	1971-72	1972-73
Counselor Education					
Smith, Shirley Pitt	Graduate Student Assistant	25	33	--	--
Smith, Wilma Pitt	Assistant Professor	--	--	5-	25

TTT Project Participation by Community-Sites

	1969-70	1970-71	1971-72	1972-73
Allegheny Intermediate Unit:				
Oakdale		X	X(rotating) C(rotating)	X(rotating) C(rotating)
Warrendale			X(rotating) C(rotating)	X(rotating) C(rotating)
Pittsburgh Board of Education:				
Westinghouse H.S.		X	X,T(E.Williams) C(A.Keyser)	X,T(E.Williams) C(A.Keyser)
Braddock School District:		X	X(R.Napolitan) C(B.Blanon)	
Canevin High School:		X	X(J.Shaw) C(A.Harty) T(L.Kubish)	X(rotating) C(A.Harty) T(shared)
Home for Crippled Children:		X	X(rotating) T(E.Barovitch)	X(rotating) T(A.Drasdak & C.Pollard)
Penn-Trafford School District:		X	X(D.Hewitt) C(H.Bailey) T(R.Edelman)	
Mars School District:		X	X(J.Serafino) C(B.Norris) T(A.Murchison)	
Community Development/Support Personnel:				
Model Cities				T(A. Hughey)
Urban Design Associates				C(D. Lewis)

Key:
X = active site committee () site committee chairperson
C = community involvement () community representative
T = cooperating classroom teacher(s) () named, received 50% salary from project

PERSONNEL FROM SITES & COMMUNITY

	1969-70	1970-71	1971-72	1972-73
Allegheny Intermeidate Unit:				
Oakdale		X	X(rotating) C(rotating)	X(rotating) C(rotating)
Warrendale		X	X(rotating) C(rotating)	X(rotating) C(rotating)
Pittsburgh Board of Education: Westinghouse H.S.		X	X,T(E.Williams) C(A.Keyser)	X,T(E.Williams) C(A.Keyser)
Braddock School District:		X	X(R.Napolitan) C.(B.Blanon)	
Canevin High School:		X	X(J.Shaw) C(A.Harty) T.(L.Kubish)	X(rotating) C(A.Harty) T(shared)
Home for Crippled Children:		X	X(rotating) T(E.Barovitch)	X(rotating) T(A.Drasdak & C.Pollard)
Penn-Trafford School District:		X	X(D.Hewitt) C.(H.Bailey) T(R.Edelman)	
Mars School District:		X	X(J.Serafino) C(B.Norris) T(A.Murchison)	
Community Development/Support Personnel:				
Model Cities (Administration & Staff)			T(A.Hughey)	T(A.Hughey)
Urban Design Assoc. (Urban Planner & Staff)			C(D.Lewis)	

KEY:
X = activie site committee () site committee chairperson
C = community involvement () Community representative
T = cooperating classroom teacher () named, received 50% of salary from project

APPENDIX B

SUMMARY

PROJECT PARTICIPANTS

	1969-70	1970-71	1971-72	1972-73
TTT Interns/Externs	-----	15/11	20/32	23/29
TTT Fellows (Doctoral)	24	-----	-----	-----
TT Fellows (M. Ed.)	-----	25	18	4
MAT's	-----	24	66	41
PY's	-----	40	65	18
PPY's	-----	-----	23	16
In-Service Workshop for Credit (@ 3 credits each)	-----	-----	26	48

UNIVERSITY OF PITTSBURGH TTT PROJECT

TTT FELLOWS

Recruitment Code:

A = Recruited from Experienced Teacher Fellowship Program (1967-1968)
B = Recruited as M.Ed. (TT) level fellow (1969-1970)
C = Recruited as Doctoral fellow (TTT)

Name	Recruitment code	Year of full time residence TTT project	Degree awarded or status	Position prior to TTT	Present position
Arnold, Shirley	C	1970-71	M.A.-1970 (CMU TTT) overview	Teacher, English	Coordinator, Staff Development Program
Barovitch, Eleanor	C	1972-73	overview	Asst. of Residential Living, Home for Crippled Children	Same
Biggs, Irv	C	1969-70	overview	Principal, Elementary school	Same
Bluffestone, Neil	B	1969-70	M.Ed.-1970	Teacher, Music	Principal
Boyd, Judith	A	1968-69	M.Ed.-1970	Teacher	Teacher
Bowman, Harold	C	1970-71	Ph.D.-1973	Science Supervisor (K-12)	Director of Curricula
Bragg, Fred	C	1970-71	withdrew	College counselor	Educational project mgr., University
Brown, Nathan	B	1969-70	M.Ed.-1970	Community agent-Pgh. public schools	Vice-principal Secondary school
Burney, Paralee	B	1969-70	M.Ed.-1970	Teacher	Supervisor, University & public school
Burruto, John	C	1970-71	overview	Teacher, reading	Counselor, secondary schools

Name	Recruitment code	Year of full time residence TTT project	Degree awarded or status	Position prior to TTT	Present position
Cater, Canary	B	1969-70	M.A.-1970	Consultant teacher	Principal
Clark, Harry	B	1969-70	overview	Teacher, music	Vice-principal secondary school
Cohen, Shirley	A	1968-69	M.Ed.-1970	Teacher	Counselor
Confer, Ronald	A	1968-69	Ph.D.-1971 (Ed.Comm.)	Counselor	Computer Science Board of Ed., Adjunct Professor U. of Pittsburgh
Covato, Ronald	A	1968-69	M.Ed.-1970	Teacher	Director, Auberby Home (County)
Crowshore, Linda	B	1969-70	M.Ed.-1970 (Died-1973)	Teacher, business	Principal, Teacher Ed. Center
Currie, James	C	1971-72	overview	Director, Inst. Children Program, Allegh. County	Same
Davenport, Verlene	C	1970-71	overview	Teacher	Teacher
Daykon, Barbara	C	1972-73	withdrew	Counselor	Teacher
DeForest, Cathy	C	1971-72	candidate	Teacher, English	Asst. to Superintendent
Dobkin, Sylvia	A	1968-69	M.Ed.-1970	Teacher	Counselor, secondary schools
Drake, Pauline	C	1970-71	overview	Eng. Dept. Chairman	Same
Drozeck, Alex	A	1968-69	M.Ed.-1970 Spec.-1970	Teacher	Asst. Superintendent of Schools
Eaves, Dorothy	B	1969-70	M.Ed.-1970	Teacher	Teacher Allegh. County Inst. Children program
Emler, Lois	A	1968-69	had M.Ed. credit only	Teacher	Teacher

Name	Recruitment code	Year of full time residence TTT project	Degree awarded or status	Position prior to TTT	Present position
Evans, Arthur	C	1969-70	Ph.D.-1972	Vice-Principal Elementary school	Professor of Education
Faith, Bill	A	1969-70	M.Ed.-1970 Ph.D.-1971	Teacher, English	Asst.Professor of Education
Fisher, William	C	1970-71	candidate	Program & Evaluation Specialist	Professor of Education
Fitzgibbons, Joseph	C	1969-70	overview	Counselor, Secondary school	Same
Foulkrod, William A	B	1969-70	M.Ed.-1970	Teacher	Teacher
Fountain, Hiawatha	C	1969-70	Ph.D.-1972	Community agent	Asst.Professor C & S
Franczak, Josephine	A	1968-69	M.Ed.-1970 Spec.-1970	Teacher	Counselor, Goodwill Ind.
Frye, Mariella	C	1970-71	candidate	Curriclum & Personnel Director	Coordinator of Nat. Office for Curriculum Dev.
Gaskins, William	A	1968-69	M.Ed.-1970 Ph.D.-1973	Teacher	Director, Inter-personal Relations,PSEA
George, Sr. Mary	C	1972-73	overview	Principal, Elementary school	Supervisor. University
Gleinn, Thomas	A	1968-69	overview	Teacher	Probation/Counselor,County Y.Dev. Center
Gonzales, Armida	C	1970-71	M.Ed.-1970	Teacher	Teacher
Granite, Harvey	C	1970-71	candidate	Assoc. Supervisor	Same
Haber, Paul	B	1969-70	had M.Ed. credit only	Teacher	Team Leader, Pgh. Board of Ed.

Name	Recruitment code	Year of full time residence TTT project	Degree awarded or status	Position prior to TTT	Present position
Hall, Signora	B	1969-70	M.Ed.-1970	Teacher	Counselor
Harden, Richard	C	1971-72	Ph.D.-1973	Chief of Residential Living, Home for Crippled Children	Same
Harris, Fred	C	1971-72	overview	Administrative Intern	Principal, Elementary school
Holdren, Edith A.	B	1969-70	M.Ed.-1970 candidate	Teacher, English	Program & Staff Development Specialist
Hughes, Gerald	B	1969-70	M.Ed.-1970	Consultant teacher	Principal
Hughes, Helena	C	1970-71	candidate	Substitute teacher	Dean of Students
Jackson, Wanda	A	1968-69	had M.Ed. credit only	Teacher	Teacher
Jaulus, Dick	C	1970-71	withdrew	Teacher	Team Leader
Johnson, Dennis	B	1969-70	M.Ed.-1970 Ph.D.-1972	Teacher	Dean of Students
Kernan, Mary Noel	C	1970-71	Ph.D.-1973	Teacher-supervisor	Instructor, college
Kubish, Luanne	C	1972-73	overview	Teacher, English	Curricular Coordinator
Leib, Genevieve	A	1968-69	Specialist 1970	Teacher	
Lindsay, Dorothy (Eisenhart)	C	1970-71	M.Ed.-1968 overview	Instructor, college	Trainer, Project Search
Lindsay, William	C	1971-72	overview	Teacher	Director, Project Search
Litman, Doris	C	1970-71	Ph.D.-1973	Teacher, science	Dept. Chairman, science
Lomeli, Refugio	C	1971-72	overview	Teacher, foreign language	Counselor/college instructor

Name	Recruitment code	Year of full time residence TTT project	Degree awarded or status	Position prior to TTT	Present position
Long, Charles	C	1970-71	candidate	Teacher	Asst. Professor of Teacher Ed.
Lockhart, Lillie	C	1970-71	Ph.D.-1972	Teacher	Asst. to the Vice-President Temple Univ.
McCormick, Frances	B	1969-70	M.Ed.-1970	Teacher	Teacher
Macus, Carol	C	1970-71	candidate	Teacher, English	Counselor, Secondary school
Mahler, Margaret	C	1971-72	overview	Teacher, English	Instructor, University
Mante, Daisy	C	1970-71	Ph.D.-1973	Curricular Associate	Principal, pre-school
Mantis, William	B	1969-70	withdrew	Teacher, Social science	Teacher, Social science
Mar, Donald	C	1969-70	overview	Team Leader	Director, Right to Read Program
Michael, Beverly	C	1971-72	overview	Teacher, math	Team Leader, Teacher Corp
Miller, LaVerta	A	1968-69	had M.Ed. credit only	Teacher	
Mlinarich, John	C	1971-72	overview	Teacher, Social science	Teacher, Social science
Nasman, Daniel	C	1971-72	candidate	Director, PPS/ counselor	Guidance project coordinator
Ollison, Cedric	A	1968-69	M.Ed.-1970	Teacher	Counselor, Secondary school
Olszewski, Thomas	A	1968-69	M.Ed.-1970 Spec.-1970	Teacher	Coordinator, Model Cities
Orr, Louis	C	1970-71	withdrew	Dept. Chairman, Industrial Arts	Same

Name	Recruitment code	Year of full time residence TTT project	Degree awarded or status	Position prior to TTT	Present position
Pike, Gordon	C	1971-72	overview	Teacher, reading	Public School Master Teacher
Pogue, Hartman	C	1971072	overview	Teacher, science	Public School Master Teacher
Pumphrey, Daniel	C	1970-71	Ph.D.-1973	Dept. Chairman, English	Trainer of Teachers, H.S.
Pupilli, Eugene	C	1970-71	withdrew	Teacher	Teacher
Rankin, James	C	1970-71	withdrew	Dept. Chairman Science	Vice-Principal
Reese, Thomas	A	1968-69	had M.Ed. credit only	Asst. Principal	Same
Rivas, Vincent	C	1970-71	Ph.D.-1972	Staff member-San Diego St. College	Asst.to the President-San Diego St. College
Santana, Bernard	C	1971-72	overview	Teacher, Secondary school	Supervisor
Seitzinger, Thomas	C	1971-72	Ph.D.-1973	Teacher, Secondary school	Inservice Coordinator
Selmeczy, Rochelle	C	1970-71	overview	Teacher	Coordinator Learning Center Community Col.
Serafino, Gerald	V	1969-70	M.Ed.-1970 candidate	Teacher, remedial	Unit Director Mental Health Center
Smith, Wilma	B	1969-60	M.Ed.-1970 Ph.D.-1972	Teacher	Chairperson, Educational Development Services
Sperber, Stephen	B	1969-70	Ph.D.-1972	Counselor Secondary schools	Adjunct Prof. Teacher Corps.
Stofka, Glenn	C	1969-80	overview	Elementary Supervisor	Principal, Elementary school

Name	Recruitment code	Year of full time residence TTT project	Degree awarded or status	Position prior to TTT	Present position
Strange, Russell	C	1970-71	withdrew	Counselor Secondary schools	Vice-principal Middle school
Stuehringer, Jean	C	1970-71	withdrew	Teacher	
Sutton, Kenneth	C	1969-70	Post Doctoral	Asst. Prof. U. of New Mexico	Assoc. Prof. N. Illinois University
Taff, James	C	1971-72	candidate	Teacher, English	Teacher-teacher trainer
Taylor, Gerald	V	1969-70	M.Ed.-1970	Teacher	Drug counselor
Thompson, Albert	C	1969-70	Ph.D.-1973	Asst. Prof. college	Associate Prof. college
Timney, Thomas	A	1968-69	Specialist 1970	Teacher	Principal Warrendale
Tomich, Nicholas	A	1968-69	candidate	Teacher, Social studies	Sr. Research consultant in Teacher Training (evaluation)
Trimble, Lee	A	1968-69	M.Ed.-1970	Teacher, art	Same
VanDerlinder, Stephen	B	1969-70	M.Ed.-1970	Teacher, Secondary school	Same
Walsh, Robert	A	1968-69	Spec.-1970 Ph.D.-1971	Teacher/ Counselor	Asst. Prof. of Education-college
Williams, Erma	A	1968-69	M.Ed.-1970 candidate	Teacher, math	Teacher/ Instructional leader
Wilson, Robert	B	1969-70	M.Ed.-1969 Spec.-1970	Teacher	Counselor/ probation
Winn, Ulysses	B	1969-70	M.Ed.-1970 candidate	Teacher	Coordinator of Inservice-Model Cities
Winsand, Jean	B	1969-70	M.Ed.-1970 Ph.D.-1971	Teacher	Asst. Professor Reading & Lang. Arts

Name	Recruitment code	Year of full time residence TTT project	Degree awarded or Status	Position prior to TTT	Present position
Young, Dorothy	B	1969-70	M.Ed.-1970 Ph.D.-1973	Teacher	Learning Disability Specialist
Zambanini, Julian	C	1971-72	overview	Vice-principal	Head Master, high school
Zito, Alan	C	1970-71	Ph.D.-1973	Teacher	C.O.P. Inservice trainer

UNIVERSITY OF PITTSBURGH TTT PROJECT

MAT's,PY's,PPY's

	1970-71	1971-72	1972-73
Adams, Linda		PY	
Aderholt, Kathleen		PY	
Albig, Karen			MAT
Ali, Aleta		PY	
Allera, Rosemarie		PY	
Angelo, Antoinette		PY	
Angerman, Gerald			MAT
Angle, Patricia		MAT	
Anolik, Sherry		PY	
Apfel, Arlene		MAT	
Balas, Ethel	PY		
Barent, Rae		PY	
Barnett, Danny		PY	
Barr, Harriet	MAT		
Baskind, Jill	PY		
Beam, Lois	MAT		
Bell, MaryBeth		PY	
Bencsics, Lawrence		MAT	
Benefield, Terry			PY

	1970-71	1971-72	1972-73
Bennati, Timothy	PY		
Beriach, Jane	MAT		
Blakeman, Shayne		PPY	
Bolds, Rudolph		PPY	PY
Brannish, Mary		PPY	PY
Brinker, Robert		PY	
Brown, Cheryl		PY	
Brown, Mary		MAT	
Bryant, Marguerite		PPY	
Bryant, Prudence		PY	
Burgess, Jane		PPY	PY
Burke, Janet		MAT	
Cagney, Kathleen		PPY	
Calloway, Pauline		PY	
Capers, Michelle		MAT	
Caputa, Suzanne		PY	
Caricchio, Linda	PY		
Carr, James		MAT	
Caseino, Letitia	PY		
Charney, Daniel	MAT		
Cherry, Stephen		PY	
Chesebrough, David		PY	
Chiochette, Loretta		PY	
Ciglio, Mark	MAT		
Coakley, Nancy	PY		

	1970-71	1971-72	1972-73
Cogan, Jeremy		MAT	
Coltin, Sue	MAT		
Connors, William	PY		
Cook, William			PY
Cooper, Gertrude	PPY		
Corbin, Martha	PPY		
Corcetti, Michael		PY	
Cotton, Fred		PPY	
Cottrell, Daniel		PY	
Cowan, Joy	MAT		
Craig, Joan		PY	
Crosby, Margaret	MAT		
Cunningham, Carol		PY	
Davis, Joyce			PPY
Deitz, Ronald		MAT	
Delaney, MaryJane		PY	
Dewolf, Harold		PY	
Dobos, Carol	PY		
Donley, Bernadette			PPY
Donley, Dorothy	PY		
Dreher, Sara			MAT
Durchman, Lynn	PY		
Dyer, Judith	PY		

	1970-71	1971-72	1972-73
Ellis, Robert	MAT		
Elkind, Barbara		MAT	
Fagan, Joyce			MAT
Fahey, Richard			MAT
Familoni, Pinkie			MAT
Fleischer, Marilyn	MAT		
Fleming, Sue	MAT		
Fong, John		MAT	
Fradkin, Roslyn		PY	
Fresch, Joan		MAT	
Fritsche, Carole		PY	
Furka, Betty		PPY	
Furko, Rebecca		PY	
Gasowski, Paul		MAT	
Gentilcore, Donna	MAT		
George, Sandra			MAT
Gerber, Sheila		PY	
Getty, Mattin			MAT
Gibson, Sally		PY	
Glanville, William		PY	
Gloster, Lorin		MAT	
Goldberg, Wendy	MAT		

	1970-71	1971-72	1972-73
Graulty, Kevin		PY	
Gray, Sheila		PY	
Greene, James		MAT	
Gregorian, Gerogene		MAT	
Grim, Alan		PY	
Gwin, Paula	PY		
Hackett, Thomas			MAT
Hajnosz, Richard		MAT	
Hardway, Vicki	PY		
Harris, Elizabeth			MAT
Hartmann, Suzanne	PY		
Heil, Carolyn		MAT	
Henke, Edward		PY	
Hilboky, Joan	PY		
Hildebrand, Clarice	PY	MAT	
Hillegas, Donna	PY		
Hirsh, Gail	MAT		
Hollaway, Elizabeth		PY	
Holsinger, John		MAT	
Holt, Russell		PY	
Hull, Cynthia		PY	
Hunkle, Mary S.	PY		
Hutton, Samuel			PY

	1970-71	1971-72	1972-73
Imbriale, Joseph			PY
Jacobs, Robert			MAT
Jarrett, Carolyn		PPY	
Jetcyk, Frances			MAT
Johns, Pamela			MAT
Johnston, John		MAT	
Jones, Robert		PY	
Junker, Patricia		PY	
Kalanja, Robert		PY	
Karn, Vera			PY
Keister, Kaye	MAT		
Keller, Better		PY	
King, Andrew			PY
Klasterka, Thomas		PY	MAT
Knight, Addrallace		PPY	PPY
Koehler, Harry		MAT	
Krall, John		PY	
Kraus, Henry	MAT		
Krulae, David		PY	
Kubish, Sister Luanne	MAT		
Kuglar, Stephen		PY	
Kuzmiak, Charles		PY	
Kwitowski, Joan	PY		

	1970-71	1971-72	1972-73
Lace, Norma	PY		
Latshaw, Nancy			MAT
Laufman, Harry	MAT		
Lawson, Anna Mae		PY	MAT
Lee, Lynda	PY		
Lennon, Donald		PY	
Lester, Bobbie		PY	
Leukhardt, Joan		PPY	
Lewis, Harold			MAT
Lichius, David	PY		
Lightfoot, Constance		PPY	
Lobaugh, Kenneth		MAT	
Lohr, John		PY	
Longe, Diane		MAT	
Luty, MaryAnne		MAT	
Macko, Thonda	PY		
Mahbood, Connie		PY	
Malley, Virginia		MAT	
Mamula, Nicholas			MAT
Marcinkwicz, Lawrence		MAT	
Marshall, Dorothy	PPY		
Matelan, Michael		PY	
Mayfield, Bill		PY	
McCauley, Arzella			MAT

	1970-71	1971-72	1972-73
McCloskey, William			MAT
McKinley, Robert		MAT	
McNiff, Patricia			MAT
Mebane, Carol		MAT	
Melrath, Russell		MAT	
Mertz, Theodore		MAT	
Messich, Paula		MAT	
Miccio, Harry		MAT	
Millenky, Robert			MAT
Miller, David		MAT	
Miller, Faustina	PY		
Miller, Gwendolyn		MAT	
Monetti, Dorothy	MAT		
Moore, Gwendolyn		PPY	PPY
Morrow, Patricia	PY		
Mueser, Albert			PY
Nardozzi, Joseph			MAT
Nelson, Barbara		PPY	PPY
Nelson, Sharon		MAT	
Neville, Kathryn	PY		
Nicotera, Charles			MAT
Norkus, Virginia			MAT
O'Brien, Kevin	MAT		

	1970-71	1971-72	1972-73
Obringer, John		MAT	
O'Hair, Rae		MAT	
O'Keefe, Kenneth	PY		
Papson, Patricia		PY	MAT
Peay, Ruth		MAT	
Peeks, Audrey		PY	
Pena, Hector		MAT	
Perry, Ross	MAT		
Philipson, Claudia		MAT	
Phillips, Jessie	PPY		
Phillips, Samuel		PY	
Philpot, Lois		MAT	
Piljay, Joseph		MAT	
Pizzani, Frank		MAT	
Pobicki, MaryAnn	PPY	PY	
Pointowski, Peter		PPY	
Polutnik, Deborah		PY	
Popich, Michael			MAT
Powers, Michael		PPY	PPY
Poziviak, Paul			MAT
Quillen, Cathy		MAT	
Rapport, Ray	MAT		
Raymont, Janice		MAT	

	1970-71	1971-72	1972-73
Rhodes, Garland	PPY		
Robinson, Eva Marie		PY	
Rogers, MaryLou	PY		
Rosepink, MaryJane	PPY	MAT	
Rote, MaryLou		MAT	
Rothbart, Betty		PY	
Rouse, Sarah		PPY	
Rudolph, Kathleen			PY
Sakach, Christine	PY		
Sauka, Michael		MAT	
Sayell, Lynn		PY	
Scheftic, Carol			MAT
Scholar, Robert			PY
Schmidt, Timothy			PY
Schwartz, Nancy	PY		
Sciullo, Michael		PY	
Senko, Shirley		MAT	
Sepanski, John		MAT	
Sheps, Leah	PY		
Shope, Margaret	PY	MAT	
Shorter, Winnie		PPY	PPY
Simon, Marc		MAT	
Simpson, Barbara	MAT		
Smith, Alan			MAT

	1970-71	1971-72	1972-73
Smith, Ethel		MAT	
Smith, Greg		MAT	
Smith Gregory			PY
Soccio, Judith			PY
Soltis, Patricia	PY		
Stanczak, Richard		PY	
Standa, Loretta			MAT
Strawder, Margaret		PPY	
Strong, Sharon	MAT		
Sullivan, Ronald		MAT	
Sutherland, Jeffrey		PPY	PPY
Switala, Claudia		PY	MAT
Talley, Lucille		PPY	PPY
Taylor, Jack		PY	
Therisod, Catherine	PY		
Timko, Judy	PY		
Tokar, Loretta		PY	
Tolliver, Reginald	PY		
Toth, Carol	PY		
Turka, Robert		MAT	
Tymochko, John		MAT	
Ulizio, Janet		PY	
VanDuesen, Garry		MAT	

	1970-71	1971-72	1972-73
Vassallo, Paula			PY
Veri, Bernadine		PPY	PPY
Vietmeier, William		PY	
Wagner, Rebecca			MAT
Waldholz, Michael			MAT
Walsh, John	PY		
Walsh, Thomas		PY	
Weaver, Linda			MAT
Weaver, William			MAT
Wever, James			PY
White, Catherine		PY	MAT
Whiteford, MaryCeleste			MAT
Wilcher, Elizabeth	PY		
Wilson, Beverly			MAT
Woodring, Judith		PPY	PPY
Wouton, Geraldine	PPY		
Youngblut, Lynn		PY	

APPENDIX C

Current Highest Degree for 103 TTT

Fellows by Recruitment Groups

	Experienced Teacher Fellowship 1968 - 1969		Med Fellowship 1960 - 1970		Doctoral Students 1969 - 1973	
Degree Status	A		B		C	
Ph.D.	5	22.7%	6	24%	13	23.2%
Candidate	2	9.1	3	12	3	14.3
Overview	1	4.5	2	8	24	42.8
Specialist	4	18.2	1	4	0	0
Med	6	27.3	11	44	1	1.8
Credit Only	3	13.7	1	4	1	1.8
Fellowship Year Only	0	0	1	4	9	16.1
No Data	1	4.5	0	0	0	0
TOTAL	N=22		N=25		N=56	

Current Level of Functioning for 103

TTT Fellows by Recruitment Groups

Current - Job						
TTT UN	1	4.5%	4	16%	8	14.3%
TTT LEA	1	4.5%	0	0%	5	8.9%
TTT Other	1	4.5%	1	4%	2	3.5%
TT UN	1	4.5%	1	4%	8	14.3%
TT LEA	6	27.3%	8	32%	23	41.1%
TT Other	2	9.1%	5	20%	1	1.8%
T	7	31.9%	5	20%	8	14.3%
No Data	3	13.7%	1	4%	1	1.8%
	N=22		N=25		N=56	

Vertical Job Mobility (Pre-Post TTT) for

103 TTT Fellows by Recruitment Group

Pre-Post Job							
TTT	TTT	0	0 %	0	0%	3	5.3%
TT	TTT	0	0 %	0	0%	6	10.7%
T	TTT	3	13.6%	5	20%	7	12.5%
TT	TT	1	4.5%	3	12%	15	26.8%
T	TT	8	36.4%	11	44%	16	28.6%
T	T	7	31.9%	5	20%	8	14.3%
No Data		3	13.6%	1	4%	1	1.8%
TOTAL		N=22		N=25		N=56	

SUMMARY

Comparison of Employment Status[1] All Non-Doctoral TTT Students for 1971-72 with 1972-73
(Data in Per cent)

	MAT		PY		PPY		Total	
	N=66 71-72	N=41 72-73	N=63 71-72	N=17 72-73	N=23 71-72	N=16 72-73	N=152 71-72	N=71 72-73
Teaching and Teaching Related	78.8	68.2	49.2	41.2	17.4	68.7	57.2	62.1
Student	6.0	7.4	33.3	17.6	65.2	18.7	26.3	12.2
Employed - Other	6.1	14.6	3.2	29.4	0	0	3.9	14.9
Unemployed	6.1	7.3	4.8	0	0	6.3	4.6	5.4
No data or Discontinues	3.0	2.5	9.5	11.8	17.4	6.3	8.0	5.4

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[1] Follow-up four months after program

Comparison of Follow-up of Employment Status[1] for 1971-72 with 1972-73 Non Doctoral Students

	MAT		PY		PPY		Total	
	71-72	72-73	71-72	72-73	71-72	72-73	71-72	72-73
	N=66	N=41	N=63	N=17	N=23	N=16	N=152	N=71
Secondary Teaching	66.6%	46.3%	44.4%	29.4%	0%	18.7%	47.4%	36.5%
College	6.1%	7.3%	3.2%	0%	0%	0%	3.9%	4.0%
Relate Teaching Substitute-Cont.--Head Start	6.1%	14.6%	1.6%	11.8%	17.4%	50.0%	5.9%	21.6%
Undergrad - Pitt	0%	0%	6.3%	11.8%	65.2%	18.7%	12.5%	6.8%
Grad - Pitt	3.0%	4.9%	22.2%	5.8%	0%	0%	10.5%	4.0%
Grad - Other	3.0%	2.5%	4.8%	0%	0%	0%	3.3%	1.4%
Employed - Other	6.1%	14.6%	3.2%	29.4%	0%	0%	3.9%	14.9%
Unemployed	6.1%	7.3%	4.8%	0%	0%	6.3%	4.6%	5.4%
Discontinued	1.5%	--	9.5%	--	13.1%	--	6.6%	--
No - Data	1.5%	2.5%	0%	11.8%	4.3%	6.3%	1.4%	5.4%

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[1] Follow-up four month after program.

Employment Status[1] 1971 - 1972 Non Doctoral Students

	MAT		PY		PPY		Total	
	N=66		N=63		N=23		N=152	
	N	%	N	%	N	%	N	%
Secondary Teaching	44	66.6%	28	44.4%	0	0%	72	47.4%
College Teaching	4	6.1%	2	3.2%	0	0%	6	3.9%
Related Teaching	4	6.1%	1	1.6%	4	17.4%	9	5.9%
Undergrad - Pitt	0	0%	4	6.3%	15	65.2%	19	12.5%
Grad - Pitt	2	3.0%	14	22.2%	0	0%	16	10.5%
Grad - Other	2	3.0%	3	4.8%	0	0%	5	3.3%
Employed - Other	4	6.1%	2	3.2%	0	0%	6	3.9%
Unemployed	4	6.1%	3	4.8%	0	0%	7	4.6%
Discontinues TTT	1	1.5%	6	9.5%	3	13.1%	10	6.6%
No data	1	1.5%	0	0%	1	4.3%	2	1.4%

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[1] Follow-up four months after program

Employment Status[1] - 1972-1973 Non Doctoral Students

	MAT N=41	PY N=17	PPY N=16	Total N=74
Secondary Teaching	19 - 46.3%	5 - 29.4%	3 - 18.7%	27 - 36.5%
College Teaching	3 - 7.3%	0 - 0%	0 - 0%	3 - 4.0%
Related Teaching	6 - 14.6%	2 - 11.8%	8 - 50.0%	16 - 21.6%
Undergrad - Pitt	0 - 0%	2 -11.8%	3 - 18.7%	5 - 6.8%
Grad - Pitt	2 - 4.9%	1 - 5.8%	0 - 0%	3 - 4.0%
Grad - Other	1 - 2.5%	0 - 0%	0 - 0%	1 - 1.4%
Employed - Other	6 - 14.6%	5 - 29.4%	0 -0%	11 - 14.9
Unemployed	3 - 7.3%	0 - 0%	1- 6.3%	4 - 5.4%
No Data	1 - 2.5%	2 - 11.8%	1 - 6.3%	4 - 5.4%

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[1] Follow-up four months of the program.

APPENDIX D

I. Reports, Articles, Printed Materials

"Innovative Intern Program in Secondary Education-TTT at Pitt," *EDWORD*, School of Education, University of Pittsburgh, June, 1971, page 4.

Morrison, Pat, "Training Teacher Trainers in Innovation to Education", *Westmoreland* (Pa.) *Star*, December 23, 1971.

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_____., *A Pre-Professional Program*, Department of Secondary Education, School of Education, University of Pittsburgh, Pittsburgh, Pa., October, 1971.

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II. Presentations

A. Professionel Associations

Association Supervision and Curriculum Development Action Laboratory - "Restructuring Teacher Education", (March 6-10, 1971)
  John Guthrie
  Jeremiah Horgan

American Association of School Administration, Panel-"Training Teachers - A New School - Community Effort", (February, 1972)
  Charles Ruch
  John Guthrie

American Personnel and Guidance Association Atlanta Regional Meeting, Panel - "Does Counselor Education Have Anything to Contribute to Teacher Education?", (May, 1973)
  Charles Ruch
  William Veenis
  Wade Baird
  Patrick Malley

Pennsylvania Teacher Education Conference, Panel Presentation - "Combined In-Service--Pre-Service Training Models", (October, 1972)
  Christopher Rawson
  Wade Baird
  Charles Ruch

B. Cluster Conferences

Southeastern & Appalachian Clusters, "Year of the Liberal Arts and TTT" - Miami, Florida - (June 21-23, 1970)

Great Lakes Cluster Meeting, "The Schools and TTT" - Cleveland, Ohio - (October 25-27, 1970)

Great Lakes Cluster Meeting, "The Liberal Arts and TTT" - Syracuse, New York - (December 6-8, 1970)

Cluster-L.T.I. Meeting, "Cultural Pluralism and Teacher Education" - Chicago, Illinois - (May 12-14, 1971)

C. Special Conferences

Invitational Meeting on English and the Teaching of English
Pittsburgh, Pennsylvania - (May 1-3, 1971)

American Historical Association Meeting - Pittsburgh,
Pennsylvania - (November 7-9, 1971)

III. Doctoral Dissertations - (unpublished)

Bowman, Harold, "The Affect of Alternative Techniques for Modifying Student-Teacher Behavior During the Field Experience", December, 1972.

Confer, Ronald, "The Effect of One Style of Computer Assisted Instruction on the Achievement of Students Who are Repeating General Mathematics", April, 1971.

Croushore, Linda, "A System for Monitoring Educational Program Development Groups", April, 1973.

DeForest, Cathy, "The Design of the Developmental and Implementation Process of the Contract Method of Learning Used to Individualize Instruction in a Classroom", August, 1974.

Drake, Pauline, "A Comparative Study of the Educational Aspirations, Reading Interests, and Instructional Needs of High School Seniors in College-Bound English Classes. April, 1974.

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Fisher, William, "Enhancing the Quality of In-Service Education: the Inter Agency Task Force as an Environment for Learning" August, 1974.

Fountain, Hiawatha, "A Description and Evaluation of a 'Local Educational Change Program' for Persons Employed by Local Community Agencies", August, 1972.

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Granite, Harvey, "Rational and Design of an Internship for the Training and Acculturation of Urban Secondary School Teachers of English in Rochester, New York", August, 1974

Gregorich, Stephen, Ed.D., "Parent and Teachers in Micro-teaching", (Received degree through Elementary Education Department), August, 1971.

Harden, Richard Rex, "A Comparative Study of an Experientially and Traditionally Taught Human Development Course for Teachers in Training", December, 1973.

Johnson, Dennis C., Jr., "A Motivational Teaching Method in English, Reading and Language Arts for Specially Selected UCEP Students at the University of Pittsburgh", April, 1972.

Kernan, Mary Noel, "The Effects of a Human Development Program on Performance in College Freshman Writing Classes", June, 1973.

Litman, Doris Heil, "An Evaluation of a Field-Oriented, Competency-Based In-service and Pre-service Science Education Program", December, 1973.

Lockhart, Lillie M., "An Analysis of Variables Which Tend to be Associated with Race Related Acts of Violence at Specific Schools in Pittsburgh, Pennsylvania from 1967 to 1970", August, 1972.

Macus, Carol, "A Study of Female Adolescent Character in Selected American and English Novels of Adolescence 1960 to 1970: Guidelines for English Teachers", August, 1974.

Mante, Daisy L., "The Design of the Orientation Phase of a Program for Training Parents of Pre-school Disadvantaged Children to Provide for Their Children an Environment Conducive to Cognitive and Affective Development", December, 1973.

Miller, La Verta, "Adaption of Educational Organization to the Conditions of a Technological Society Through Application of Conflict Theory", December, 1972.

Pumphrey, Daniel Lee, "A School Organiaztion Response to Group Methods of Leadership", August, 1973.

Rivas, Vincente, "Chicano Educational Achievement and Opposing School Values Between Pupils and Schools: A Study of Success and Nonsucces", August, 1972.

Sanchez, Adolph, "The Use of Mobile Training Teams in Counselor Education", December, 1973.

Seitzinger, Thomas James, "Dogmatism and Flexibility as Related to Supervisor's Rating of Teacher Trainees, and Trainees Self-Rating, a Field Study", December, 1973.

Serafino, Gerald, "An Historical Case Study of the Federal Legislative Process as it Affects Education", August, 1974.

Smith, Wilma, "The Relationship Between Self-Concept of Academic Ability, Locus of Control of the Environment and Academic Achievement of Black Students", August, 1972.

Sperber, Stephen, "A Training Program for Teachers Using Interpersonal Process, Communications and Problem Solving Skills", April, 1972

Thompson, Albert Nelson, "The Development and Validation of a Remedial Program for Upward Bound Students Based upon the Identification of Deficiencies in Oral-Aural Communication", December, 1973.

Tomich, Nicholas, "Design Implementation and Evaluation of a Model to Train Supervisors in Value Clarification", August, 1974.

Walsh, Robert P., "A Project Design for Integrating a Program of Clinical Experiences Incorporating Team Teaching, Individualized Instruction, and Team Supervision", December, 1971.

Windsand, Jean, "A Process of Developing an Instructional Model and Staff for an Introductory Course for Reading Teachers" December, 1971.

Winn, Ulysses, "An Assessment of How Decision Making, In-service Recipients and In-service Instruction Perceive the Affluences of a Teacher Training In-service Program in a Model Cities Area", August, 1974.

Young, Dorothy M. Wagner, "The Effectiveness of an In-service Education Program for Regular Classroom Primary Teachers Regarding Recognition and Accommodation Children with Learning Problems", June, 1973.

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APPENDIX E

GREECE / ROCHESTER, NEW YORK
CONSORTIUM

The following memoranda were in response to a request for impressions of the indirect impact of the Pittsburgh TTT project on these two school systems. (ed.)

GREECE CENTRAL SCHOOL DISTRICT NO. 1

MEMORANDUM

To: Dr. Charles Ruch
Date: June 10, 1974

From: Harold Bowman

Topic: Trainer of Teacher Trainer Program in Greece Central

At your request, I am writing to indicate some of the changes which I have seen in Greece Central School District which reflect our involvement in the TTT program at the University of Pittsburgh.

We became involved with the TTT program in 1969. Several of our staff members along with staff from the State University College at Brockport attended a full year program at Pittsburgh and came back to the district to establish a teacher training center at two of our secondary schools. The intent of this project was to have local district staff become involved in training of perspective teachers while, at the same time, university staff members assigned to the district would become involved in the in-service preparation of our own district staff members. While the concept and the rationale behind this particular project was very sound, it became obvious during the course of the year that neither Greece Central nor the State University College at Brockport were ready to fully implement such a program.

Numerous problems occurred in this type of structure. Some of these included the lack of role definition for individuals who suddenly found themselves in the role of adjunct professorships and the difficulty of university personnel who had to adjust to the tasks assigned to them within the local school district. Accountability became a real issue and by the time the year was over, both the college and Greece agreed that this approach was not acceptable with the existing staff.

During the year of this project (1970-71), several other Greece and Brockport staff members attended the University of Pittsburgh. Upon their return to the school district, the participants in the previous TTT program and they agreed that prior to committing to such an overall and encompassing project, there had to be a lot of staff development work at both the local and university level. To assist in this staff development program, Title III funds were sought and a staff development process was initiated. At the same time, teacher training areas were refocused from the secondary level to the elementary level where there had already been some indication of growth and development. A site steering committee with representation from area colleges, district staff, community, and students was established for the purpose of guiding the training program at the elementary level. University personnel were able to offer courses to district staff in "Roles and Competencies" necessary for effective work with pre-service teachers. District staff were able to "team up" with university staff and offer graduate courses such as Reading, Value Clarification, and Evaluation. In addition, university staff members were able to spend much of their time at several elementary buildings working directly with district staff to ensure application of the skills being taught in the course work.

As a result of this initial piloting, the program expanded to each of our thirteen elementary buildings in Greece Central. Greece was able to assign internship positions to assist in the placement and supervision of student teachers as well as defining in-service programs which could be offered by college staff. Greece Central became integrally involved with area colleges in the establishment of teacher programs on a regional basis.

At the present time, we are continuing this work being primarily focused in the competency based teacher education programs as mandated by the New York State Education Department. While work in the pre-service, in-service level continued through joint cooperation with district and college staff, the staff development project under Title III funds was carried forward to initiate programs and processes which would enable our staff to deal with their own needs (clarification), their relationship with peers, their relationship with students and community members, and the relationship between the local school district and higher education institutions.

It is difficult to pull from the multitude of experiences which affect a school system and relate them to a particular program. However, each of the individuals who attended Pitt over our three year involvement with TTT, are now in decision making roles within the system, and I believe the manner by which decisions are now made has been greatly influenced by this group. There is greater understanding and sharing between the local and higher education institutions. Sharing staff, more programs offered off-campus and jointly planned by us, college programs for high school students, and an increased willingness to seek our input are examples of the changes I have seen within Greece and the local colleges.

lt

ROCHESTER SCHOOL SYSTEM

Rochester has employed six T.T.T. Doctoral fellows from the University of Pittsburgh. Two, Alan Zito (1970-71) and Tom Seitzinger (1971-72) have received doctorates. One (Harvey Granite) hopes to receive his doctorate in 1974. All of the above have been active in school leadership.

Alan Zito, who wrote his dissertation on competency based teacher education and clinical supervision based on his study of T.T. models in two Rochester junior high schools, worked for two years as a teacher trainer and for one year on a joint appointment between St. John Fishers and the City School District. Recently he accepted a position as Director of Instruction with the Erie, Pennsylvania school system.

Tom Seitzinger, whose dissertation was on educational decision-making, was promoted last fall to supervisor of occupational education curriculum for the City School District.

Harvey Granite was promoted from Supervising Director of Instruction to Coordinator of Urban Funded Programs on his return from the University of Pittsburgh. He was instrumental in organizing the T.T.T. project at Monroe and Douglass in the summer of 1971. His dissertation, nearing completion, is on a competency-based training program for urban English teachers. He is active in organizing new training models for urban teachers.

John Burruto, Gordon Pike, and Hartman Pogue are employed as teachers in the Rochester school system. All three are working on dissertation overviews. Burruto spent one year as a SUC Brockport staff member employed in the T.T.T. program and two years with Operation Young Adults. Pike and Pogue are teaching high school classes in science.

Harvey Granite
Assistant Superintendent

CANEVIN HIGH SCHOOL / DUQUESNE UNIVERSITY / CARLOW COLLEGE

CONSORTIUM

The following excerpts materials from the EPDA/PPS Workshop Report, "The School as a Training Site"; held at Canevin High School May 23-24, 1973. A complete report of these activities can be found in ***Changes Facing Pupil Personnel Services: Training and Service****, a Report of six workshops supervised by the Northeastern EPDA/PPS Center-Satellite Project, Department of Counselor Education, University of Pittsburgh, February, 1974.*

INTER-UNIVERSITY COOPERATION

Dr. James DeTrude
Dr. Ernest Dorow

Canevin High School is an example of a site where effective inter-university cooperation in teacher training has occurred. Three schools have been involved in this effort, but the interesting fact is that the cooperation grew out of two separate and different programs at the site. The Duquesne-Carlow project (PPS) effectively brought those two institutions of higher education, which the University of Pittsburgh became involved with Canevin through the "TTT" project.

Any attempt to operate two separate programs with similar goals at the same site seemed a wasteful effort of planning, therefore, it was natural that one committee was formed representing the three institutions of higher education and two funded projects as well as Canevin High School. Initially, this body was knows at the Site Committee. By the 1972-73 school year, this same body, modifying its goals and directions, became the Canevin Programs Committee.

Additional inter-university cooperation was assured in the 1972-73 academic year with the addition of Point Park College and Robert Morris College to the list of institutions collaborating in teacher training at this site. Since these two institutions have just become involved on-site, this report will describe the functions of the collegiate institutions which have been collaborating at Canevin for the past two years.

Duquesne, Carlow and the University of Pittsburgh have worked cooperatively on planning, implementing and evaluating the teacher training program at Canevin High School

The planning over the last two years was essentially designed to encourage interaction and cooperation among educational instutitions at all levels, elementary to university. Four major goals of this collaborative program include:

(1) to give teachers in training a number of experiences and exposures to the whole range of educational situations, kindergarten to twelfth grade;

(2) to emphasize and develop an advisory system which establishes the kind of close personal relations which help in the development of teachers;

(3) to bring together a number of coordinators from many institutions of higher education, education faculty and liberal arts faculty, to deal with a diversity of students from these institutions;

(4) to plan for the possible expansion of a private school to a community school, thereby providing services to the community beyond the traditional ones of education.

Program goals more specifically related to the teacher training model at Canevin include:

(1) to provide an on-site pre-service experience which closely approximates an actual in-service year and which focuses on the analysis of situations and the solving of problems which arise in classrooms and schools.

(2) to develop an awareness and understanding of the total educational experience, grades kindergarten through twelve, through a year-long site oriented program of directed analysis and involvement with elementary and secondary schools, faculties and students.

(3) to develop, through an inter-disciplinary approach, those skills needed to conduct and to facilitate the learning process at the elementary and/or secondary levels through a site centered program of developmental supervision and instruction.

(4) to develop the pre-service teacher's understanding and awareness of his or her self-image as a person, a teacher, and a professional through a series of directed experiences and encounters with students, peers and professional teachers designed by a multi-institutional teacher training staff.

The multi-institutional training staff includes representatives from Education and Liberal Arts faculties.

University of Pittsburgh:

1 Coordinator for Secondary Education-Social Studies
1 Mathematics - Secondary Education
1 English - Secondary Education
3 doctoral students who supervise trainees (one of these doctoral students serves as the program coordinator at Canevin)

Duquesne - Carlow:

2 Secondary Education staff members
2 Counseling or Education staff members
2 Reading and Language Arts staff members
1 Elementary Education staff member
1 School Psychologist staff member
3 Liberal Arts staff members (one each in Social Science, Language and Mathematics)

The inter-university training staff is represented on the Staff Development Committee at Canevin. The committee functions in two ways: Decision making and advisement. The teacher training institutions make decisions concerning the design of the pre-service training program, the site faculty and parent representatives advise. The site faculty and parent representatives make decisions concerning the implementation of the pre-service training program at the site; the teacher training institution representatives advise. Lastly, the teacher training institution representatives, the site faculty and community representatives jointly make decisions concerning in-service programs and community educational and service programs.

The second phase of the inter-university project at Canevin is the implementation of the various programs. Activating the commonly accepted goals and objectives of the programs requires extensive cooperation among the various colleges and university representatives on-site. These persons might be described as being interested in curricular revision of teacher training programs, authoritative regarding current trends in given subject areas and desirous of developing an on-site oriented program. Flexibility and the willingness to innovate were perhaps the outstanding characteristics of this group.

The cooperative teacher education project meets a variety of student career objectives. The project includes para-professional training, professional year students meeting Bachelor degree requirements, professional year students meeting the Master of Arts in Teaching requirements, candidates in various doctoral programs, and students involved in a regular university one-semester student teaching program.

The training schedule consists of three major site oriented activities: 1) pre-service teaching and training, 2) elementary and secondary school field experiences and 3) in-service programs for teachers, parents and community.

The pre-service teaching and training phase was designed to meet the aforementioned goals and objectives of the combined programs. The programs for regular one-semester student teaching experiences are operated by the universities in the traditional manner. Some program differences occur with respect to students meeting Bachelor or Master degree requirements. Those students meeting Master of Arts In Teaching from the University of Pittsburgh take some classes on campus. The major work assignment however is on-site. The professional year students meeting requirements for the Bachelor degree have their experience on-site, as well as on campus. Carlow students who are involved in completing requirements of a Liberal Arts degree must take some courses on campus to meet those requirements. This involves a small portion of their time that is spent on campus.

An example of the variety of activities in which the professional year student would be involved is presented in Appendix A.

The pre-service teaching and training program involves a year-long teaching experience with regular developmental supervision provided by the multi-institutional training staff. A program of elementary and secondary field experiences designed mutually by the training staff and the pre-service teachers is conducted to meet the developmental and the individual educational needs of the teachers in training. The program has provided the following developmental and instructional classes or seminars:

1. Methods for teaching the social sciences, English and the Language Arts, Math and Foreign Languages,
2. Team teaching and curriculum planning,
3. Group dynamics and management,
4. School--Community affairs,
5. Student and Teachers classroom behavior,
6. School organization,
7. Classroom management,
8. Child/Adolescent development and learning,
9. Social Systems.

The second phase of the teacher training program involves the secondary-elementary field experiences. These experiences were designed mutually by the teacher training staff and the pre-service teachers to meet the developmental and individual educational needs of the teacher in training.

The on-site instructional program designed to support the elementary-secondary field experiences has already been identified. In the 1971-72 academic year, an elementary year-long pre-service student experience was provided at the St. James Grade School site. Weekly seminars for both the secondary student teachers and the elementary student teachers were conducted by the inter-university teacher training staff. In the 1972-73 academic year, elementary pre-service student teaching was not provided. In order to meet program objectives for a kindergarten through twelve experience, a variety of elementary experiences was made available by the inter-university training staff.

The third phase of the teacher-training project at Canevin High School concerns itself with in-service programs for teachers, parents and community. Two half-day workshop titled Humanizing Education in the Elementary and Secondary School, and Multi-Media--Its Use and Value in the School were offered. In addition a series of seminars were offered. They included:

1. Group Dynamics and Management: Introduction to Counseling Techniques,
2. Affective Learning; Humanizing Schools,
3. School organization and Law
4. Teaching the Exceptional Child,
5. Developmental Reading; Remidial Reading,
6. Decision making,
7. Program Planning.

These workshops and seminars were open to all pre-service student teachers, in-service teachers and administrators, parents, community and undergraduates from the various participating colleges and universities. They were conducted by the inter-university teacher training staff.

Other in-service activities available to faculty and administrative personnel at Canevin included:

1. Availability for faculty at Canevin to take courses on-site from the participating colleges and universities to meet requirements for Instructional Level I Certification,
2. availability for faculty at Canevin to take courses on-site from the participating colleges and universities to meet requirements for Pennsylvania Permanent Certification,
3. availability of college and university staff personnel on-site to work with faculty members on a variety of issues related to education at Canevin,
4. availability of college and university personnel on-site to serve as program advisors to Canevin faculty members and MAT students who are enrolled in independent study courses and regular program courses at the various participating institutions.
5. use of a multi-university staff to conduct courses at Canevin, where credit for the course is given by one university.
6. availability of university personnel to work with curriculum development at Canevin.

Outline of program of pre-service, educational center offerings are presented in Appendix B.

The final stage of the report deals with an evaluation of the program. This report will not attempt to make value judgements regarding the project but rather will attempt to list some issues that can be identified as having some importance to the notion of inter-university cooperation at a site training center.

The issues that can be identified include a "change capability" of the project which has established the following:

1. interdisciplinary committees established at Duquesne. Carlow had established interdisciplinary committee for teacher training previously.
2. an interdisciplinary, inter-institutional committee involving Duquesne and Carlow.
3. a site Staff Developmental Committee including Canevin faculty, Duquesne , Carlow and University of Pittsburgh faculty, parent and community representatives.
4. a site advisory committee that includes parents, students, community representatives, site faculty and training institutions.
5. a "Jointly appointed and supported" program coordinator on site.

Additional effects of the inter-institutional project at Canevin include:

6. variety of in-service possibilities supportive to the site school (See description of in-service programs)
7. physical facilities are available at Canevin for multi-university cooperation
8. on-site course work decreases some faculty commitment for the college and universities (share the load)
9. faculty committed to innovation
10. sharing by Canevin and multi-universities of variety of materials made available by inter-university cooperation
11. developmental supervision model established enabling staff from participating institutions to work with students from institutions other than their own
12. possibility of a Liberal Arts College to work jointly with larger universities or schools of education
13. program has enabled teacher training personnel to become involved in a re-education of the needs and priorities of teacher education for themselves and for their own institutions
14. gathering of information of the educational, social and developmental needs of the schools and communities served by the project.

Advantages to trainees involved in such a program from the point of view of the university include:

1. availability of a variety of personnel engaged in supervision
2. availability of a variety of experiences in a year-long program that deals with personal growth, instructional competencies and personal and professional development
3. provisions of a variety of experiences that will enable the student-teacher to deal with and understand the variety of forces operating in a school setting
4. prepares the student to meet and deal with the problems of a first year teacher
5. opportunity to remain in same program but progress from one collegiate institution to another
6. opportunity to work with peers from various institutions
7. provides a self-development program of teacher training and supervision
8. varied collegiate schedules create some options in the program.

This report has attempted to describe the inter-university cooperation at Canevin High School. The three phases of the program included planning, implementation and evaluation from the collegiate point of view. Many things have been experienced as a result of this cooperative venture into teacher training. Many different issues have been raised. The point of agreement however, is that a teacher training model involving multi-institutional cooperation at a site school (Canevin) represents an exciting new dimension in teacher training.